

SERVICE MANUAL

AUDIO VIDEO CONTROL CENTER

SANSUI S-XV1000



CAUTION

1. Parts identified by the Δ symbol on the schematic diagram and the parts list are critical for safety. Use only replacement parts that have critical characteristics recommended by the manufacturer.
2. Make leakage-current or resistance measurements to determine that exposed parts are acceptably insulated from the supply circuit before returning the appliance to the customer.

•SPECIFICATIONS

Audio section

(FRONT)

Power output

Min. RMS, both channels driven, from 20 to 20,000 Hz, with no more than 0.01% total harmonic distortion.

80 watts per channel into 8 ohms

Load impedance..... 8 ohms

Total harmonic distortion

from CD/AUX..... less than 0.01% at or below

rated min. RMS power output

Intermodulation distortion (60 Hz: 7 kHz = 4:1 SMPTE method)

from CD/AUX..... less than 0.01% at rated power output

Frequency response (at 1 watt) from CD/AUX, TAPE PLAY

..... 10 to 50,000 Hz,

+1 dB, -3 dB

RIAA curve deviation (PHONO, 20 Hz to 20 kHz)

..... +0.5 dB, -0.5 dB

Input sensitivity and impedance(at 1 kHz)

PHONO..... 2.5 mV/47 kohms

(Max. input capability; 120 mV at 1 kHz, less than 0.1% total harmonic distortion)

CD/AUX, TAPE PLAY .. 150 mV/47 kohms

AUDIO PROCESSOR IN

..... 150 mV/47 kohms

Output level (at 1 kHz)

AUDIO PROCESSOR OUT, TAPE REC

..... 150 mV into 47 kohms

Signal to noise ratio (short-circuit, A-network)

PHONO..... 73 dB

CD/AUX, TAPE PLAY .. 95 dB

(SURROUND)

Power output

Min. RMS, both channels driven, from 40 to 15,000 Hz, with no more than 0.8% total harmonic distortion.

8 watts pr channel into 8 ohms

Video section

VIDEO INPUT sensitivity/

Impedance..... 1.0 Vp-p/75 ohms

VIDEO OUTPUT level/Impedance

..... 1.0 Vp-p/75 ohms

AUDIO INPUT sensitivity/

Impedance..... -6 dBs/47 kohms

AUDIO OUTPUT level/Impedance

..... -6 dBs/47 kohms

VHF OUT signal..... 3 ch or 4 ch (NTSC)

FM section

Tuning range..... 88 to 108 MHz

Usable sensitivity

Mono IHF..... 10.8 dBf (1.9 μ V:T100)

50 dB quieting sensitivity

Mono..... 16.5 dBf

Stereo..... 37.0 dBf

Signal to noise ratio at 65 dBf

Mono..... 75 dB

Stereo..... 70 dB

Distortion at 65 dBf WIDE

Mono..... less than 0.15% at 1,000 Hz

Stereo..... less than 0.2% at 1,000 Hz

to be continued ►

Sansui

SANSUI ELECTRIC CO., LTD.

Alternate channel selectivity (at 400 kHz)	55 dB
Capture ratio	1.0 dB
Image response ratio	45 dB
Spurious response ratio	75 dB
Stereo separation	40 dB at 1,000 Hz
Frequency response	
Stereo	30 to 15,000 Hz
	+1.0 dB, -1.5 dB
Antenna input impedance	
	300 ohms balanced
	75 ohms unbalanced

AM section

Tuning range	530 to 1,600 kHz
Usable sensitivity	53 dB/m
Selectivity	30 dB
Signal to noise ratio	45 dB
Distortion (at 30% Modulation, 80 dB/m)	
	less than 0.5%

Others

Power requirements

Power voltage	120, 220, 240 V
	(50/60 Hz)

For U.S.A. and Canada

	120 V (60 Hz)
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Power consumption	330 watts 410 VA Rated
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Dimensions	430 mm (16-15/16") W
	133 mm (5-5/16") H
	421 mm (16-9/16") D

Weight	9.8 kg (21.7 lbs.) net
	11.4 kg (25.1 lbs.) packed

* Design and specifications subject to changes without notice for improvements.

* Due to local laws and regulations, this unit sold in some areas are not equipped with variable voltage selectors.

CAUTION

1. The symbols, UL, CSA, SA, BS, UK, EU, AS and XX (EXPORT) on the parts list and the schematic diagram mean followings respectively.

UL..... Manufactured for U.S.A market.
(Underwriters Laboratories approved model.)

CSA..... Manufactured for Canadian market.

SA Manufactured for South African market.

BS, UK Manufactured for United Kingdom market.

EU Manufactured for European market.

AS Manufactured for Australian market.

XX (EXPORT).. Standard Version.

NON MARK Common Parts.

2. Some printed circuit boards are not supplied as the assembled.

To separate these in this service manual, the stock No's are not indicated at the ends of the board names. However, the individual parts on the circuit boards are provided by orders.

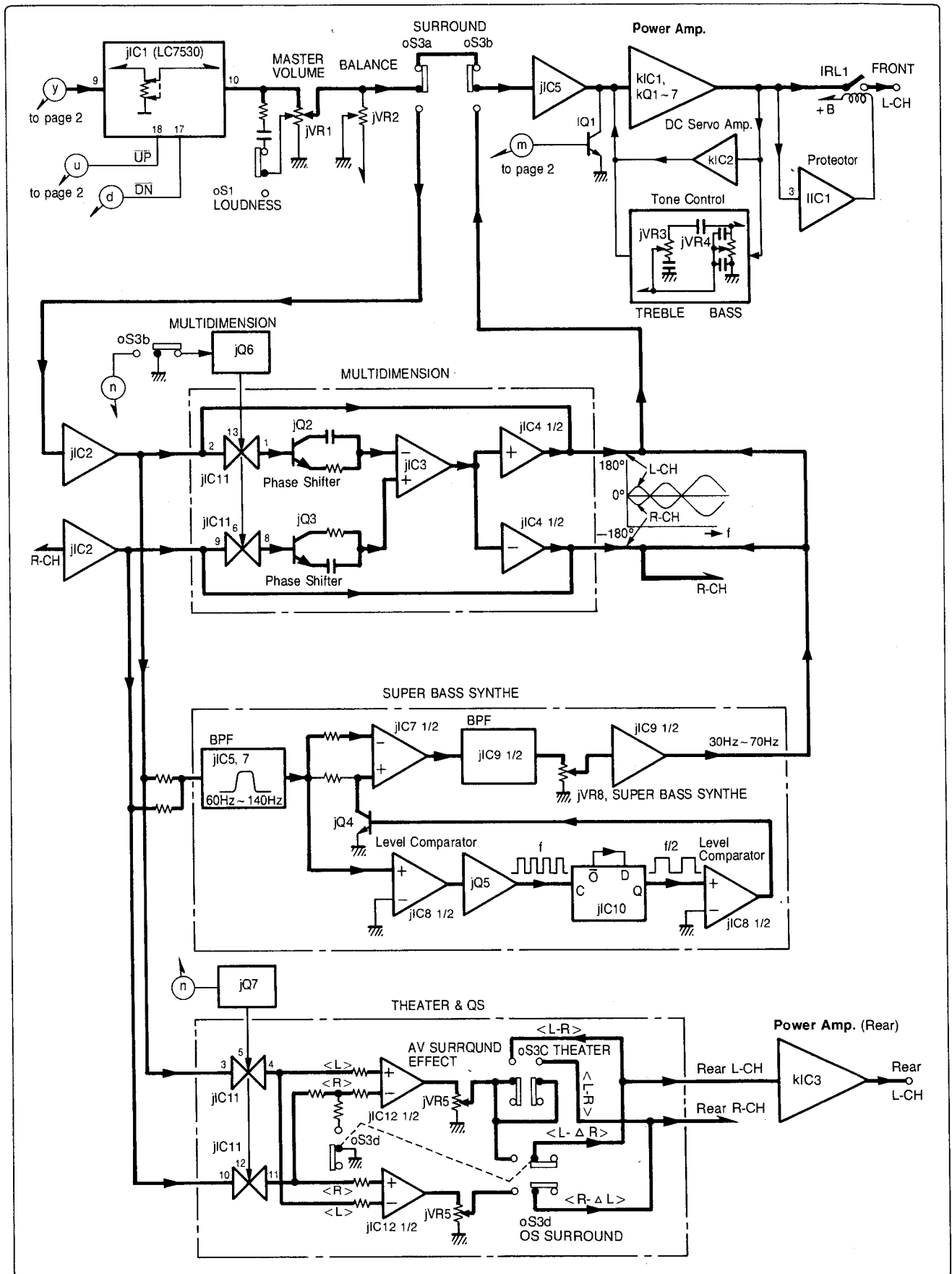
3. Since some of capacitors and resistors are omitted from parts lists in this service manual, refer to the Common Parts List for capacitors & resistors, which was issued on February 1983.

4. Abbreviations in this service manual are as follows.

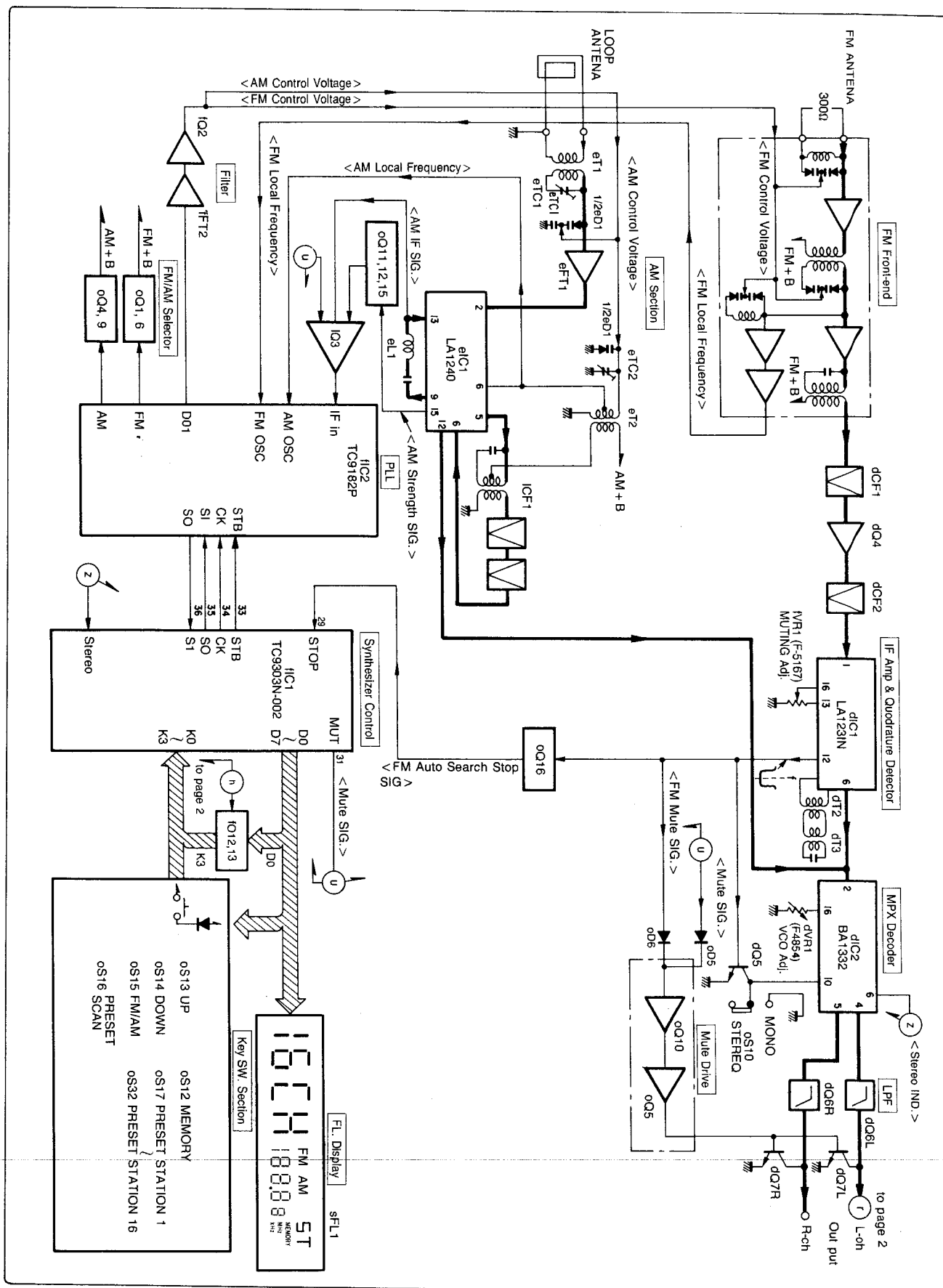
•Abbreviations List

C.R.	: Carbon Resistor
S.R.	: Solid Resistor
Ce.R.	: Cement Resistor
M.R.	: Metal Film Resistor
F.R.	: Fusing Resistor
N.I.R.	: Non-Inflammable Resistor
A.R.	: Array Resistor
C.C.	: Ceramic Capacitor
C.T.	: Ceramic Capacitor, Temperature Compensation
E.C.	: Electrolytic Capacitor
E.L.	: Low Leak Electrolytic Capacitor
E.B.	: Bi-Polar Electrolytic Capacitor
E.B.L.	: Low Leak Bi-Polar Electrolytic Capacitor
Ta.C.	: Tantalum Capacitor
F.C.	: Film Capacitor
M.P.	: Metalized Paper Capacitor
P.C.	: Polystyrene Capacitor
G.C.	: Gimmic Capacitor
A.C.	: Array Capacitor
V.R.	: Variable Resistor
S.V.R.	: Semi Variable Resistor
SW.	: Switch
Chip R.	: Chip Resistor
Chip C.	: Chip Capacitor

1-2. SURROUND Amp. & Power Amp. Section

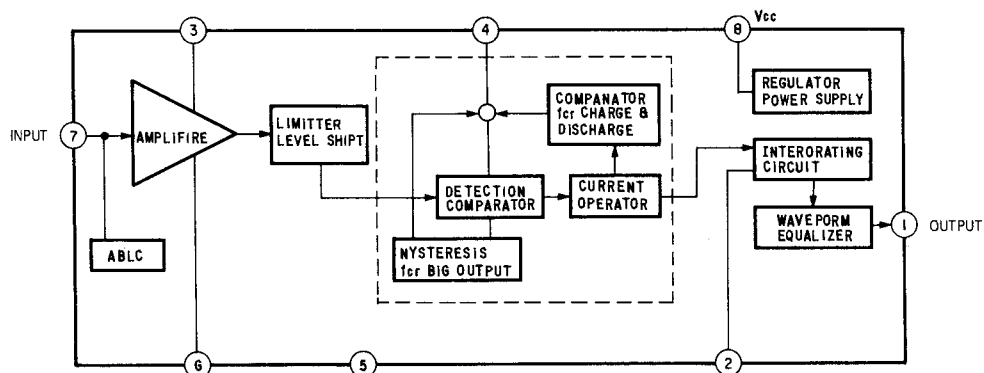


1-3. Tuner Section

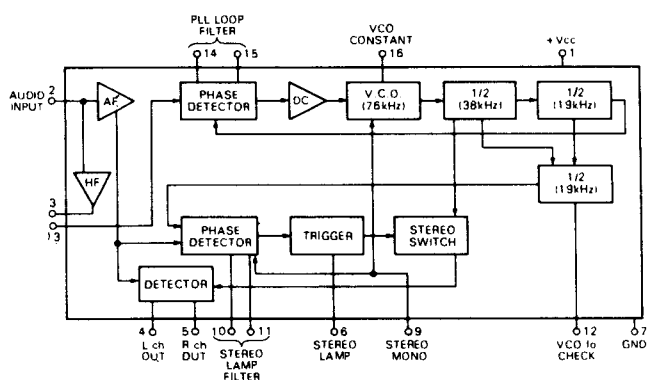


2. INTERIOR BLOCK DIAGRAM & DESCRIPTION OF IC

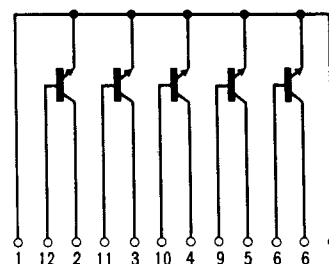
•LA7224 (Remote Control Receiver IC)



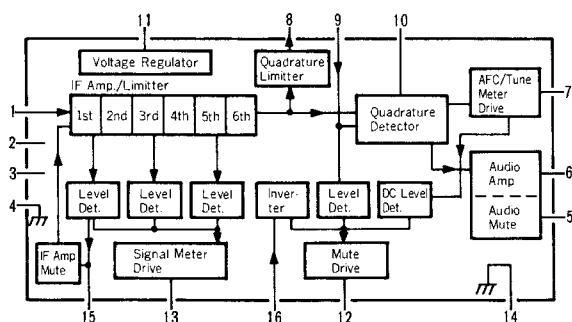
•BA1332 (MPX IC)



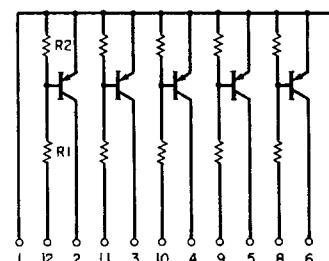
•DT5C144E (TR Array)



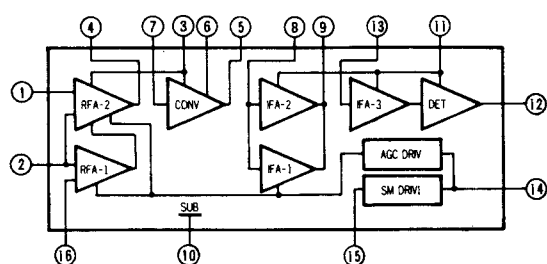
•LA1231N (IF & Quadrature Detector IC)



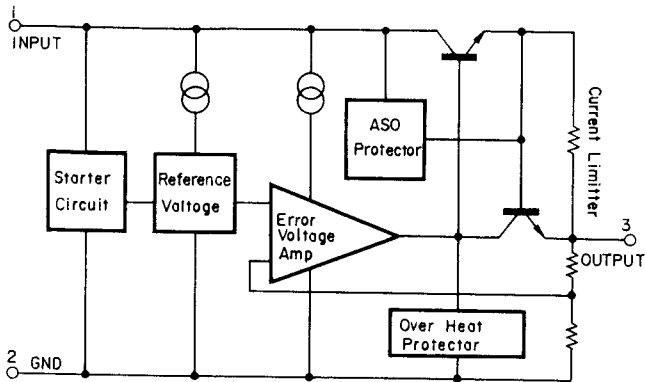
•DT5A144E (TR Array)



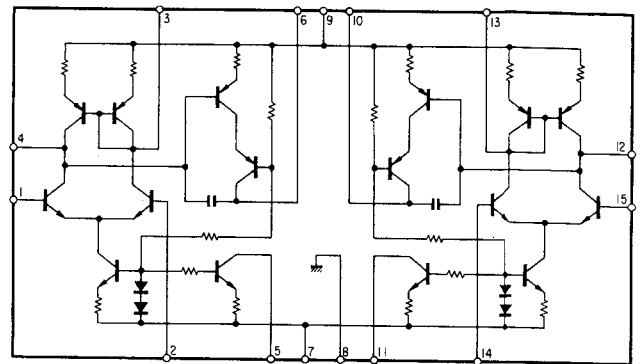
•LA1240 (AM Tuner IC)



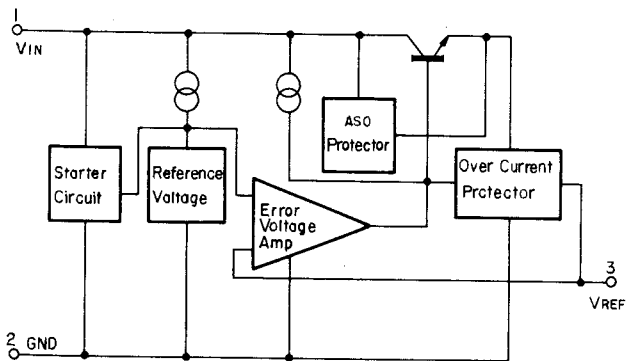
•L78N06 (Regulated Voltage Power Supply IC)



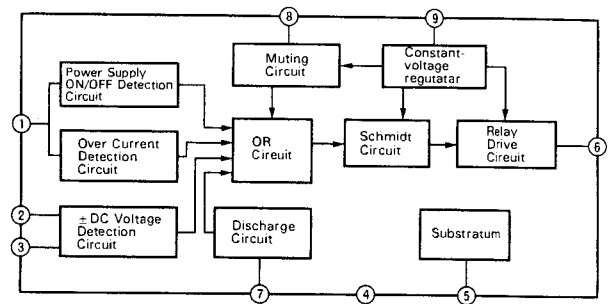
•STK3082-2A (Driver Amp. IC)



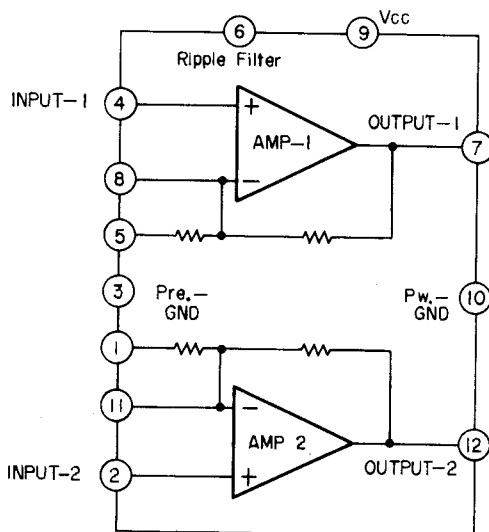
•M5236L (Regulated Voltage Power Supply Drive IC)



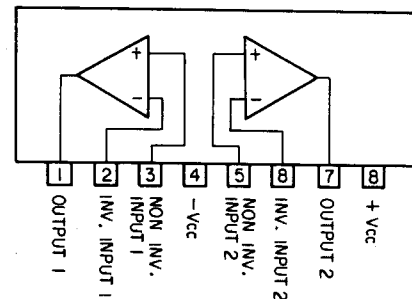
•TA7317P (Protector IC)



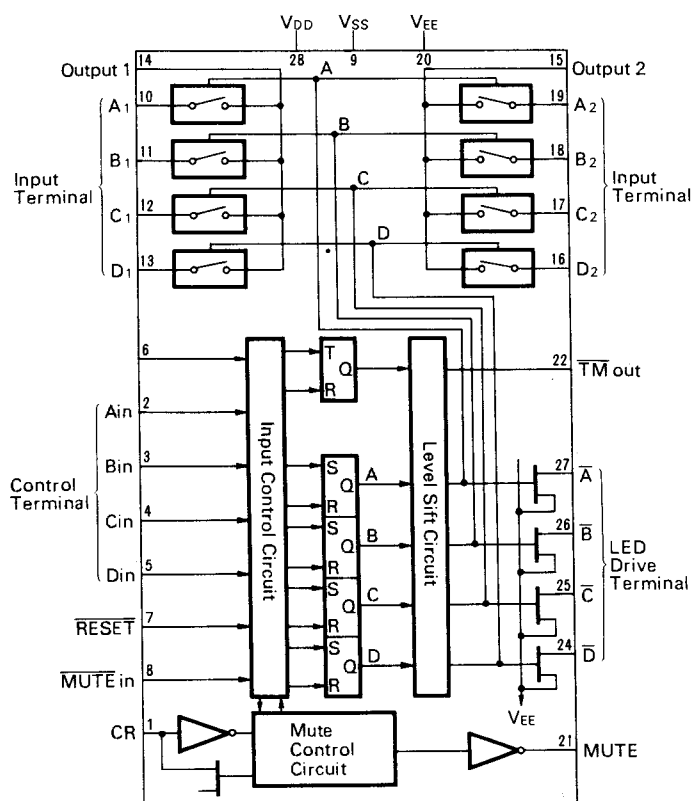
•TA7273P (Power Amp. IC)



•M5218L (Audio Pre IC)



•LC7815H (Analog Function Switch IC)

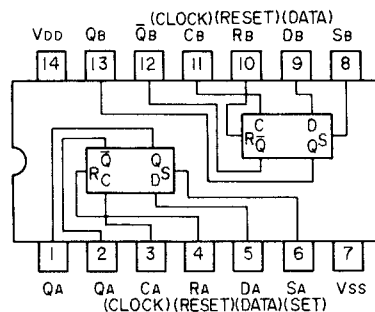


*LC7815H

Condition of control input terminals Port (Pin No.)				Connected input terminal to output 1 and 2 terminals		Connected terminal to LED indicator
Ain (2)	Bin (3)	Cin (4)	Din (5)	PORT (Pin No.)	PORT (Pin No.)	PORT (Pin No.)
H	*	*	*	A1 (10)	A2 (19)	A (27)
L	H	*	*	B1 (11)	B2 (18)	B (28)
L	L	H	*	C1 (12)	C2 (17)	C (25)
L	L	L	H	D1 (13)	D2 (16)	D (24)

H: H level L: L level *: Don't care

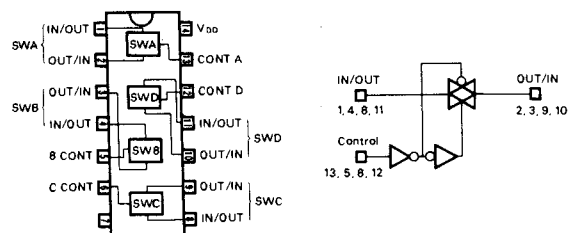
•BU4013B/ μ PD4013BC (Dual Flip Flop IC)



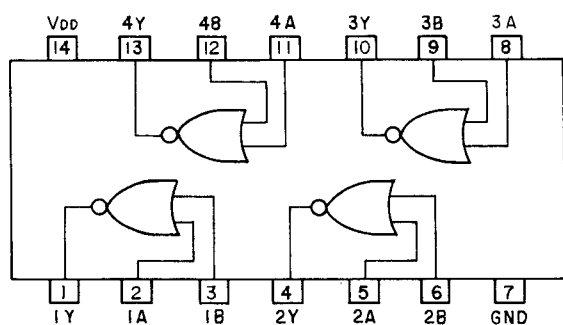
Input				Output	
CLOCK	DATA	SET	RESET	Q _{n+1}	$\overline{Q}_{n+1}$
	L	L	L	L	H
	H	L	L	H	L
	X	L	L	Q _n	$\overline{Q}_n$
X	X	H	L	H	L
X	X	H	H	L	L

H : High
L : Low
X : H or L
Q_n : Output signal before clock pulse
Q_{n+1} : Output signal after clock pulse

•LC4066BH (Quad Analog SW. IC)



•LR74HC02 (Quad NOR IC)



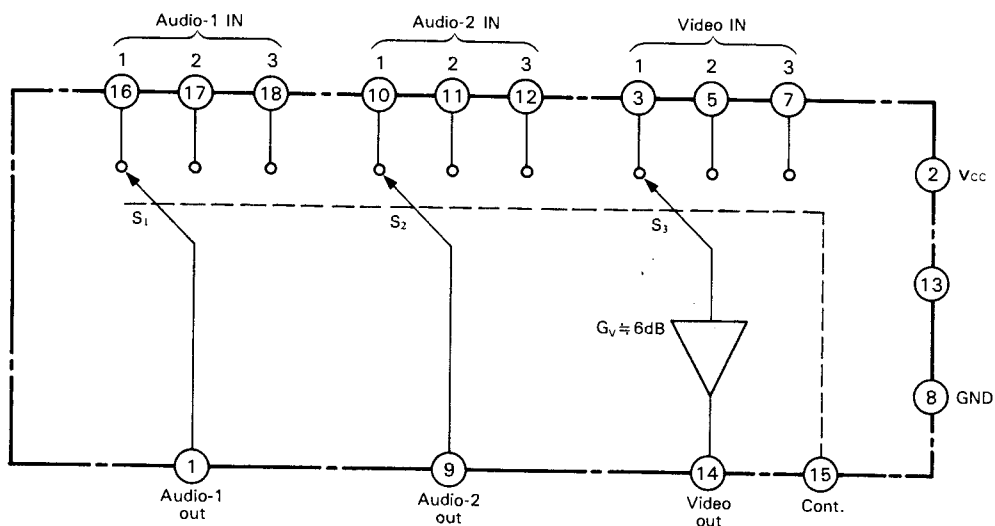
•LC7530 (Electronic Sound Volume IC)

<Description of Terminals>

Pin No.	Terminal Name	Description																																																																																																																																																									
1 ~ 8	IND1 ~ 8	Sound volume position displaying output terminals: When INIT is at "L", only IND5 is at "H". <table><tr><th>Control terminal of analog switch</th><th colspan="8">IND</th></tr><tr><th></th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th></tr><tr><td>1</td><td>H</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>2</td><td>H</td><td>H</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>3</td><td></td><td>H</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>4</td><td></td><td></td><td>H</td><td>H</td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td></td><td></td><td></td><td>H</td><td></td><td></td><td></td><td></td></tr><tr><td>6</td><td></td><td></td><td></td><td>H</td><td>H</td><td></td><td></td><td></td></tr><tr><td>7</td><td></td><td></td><td></td><td></td><td>H</td><td></td><td></td><td></td></tr><tr><td>8</td><td></td><td></td><td></td><td></td><td>H</td><td>H</td><td></td><td></td></tr><tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td>H</td><td></td><td></td></tr><tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td>H</td><td>H</td><td></td></tr><tr><td>11</td><td></td><td></td><td></td><td></td><td></td><td></td><td>H</td><td></td></tr><tr><td>12</td><td></td><td></td><td></td><td></td><td></td><td></td><td>H</td><td>H</td></tr><tr><td>13</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>H</td></tr><tr><td>14</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>H</td></tr><tr><td>15</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>H</td></tr></table> *Blanks are all floating terminals H: P-channel comes on.	Control terminal of analog switch	IND									1	2	3	4	5	6	7	8	1	H								2	H	H							3		H							4			H	H					5				H					6				H	H				7					H				8					H	H			9						H			10						H	H		11							H		12							H	H	13								H	14								H	15								H
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9,14	SIG1,2	Analog switch input terminal: Signals to be attenuated by the IC are inputted.																																																																																																																																																									
10,13	COM 1, 2	Analog switch output terminal: Signals attenuated by the IC are outputted.																																																																																																																																																									

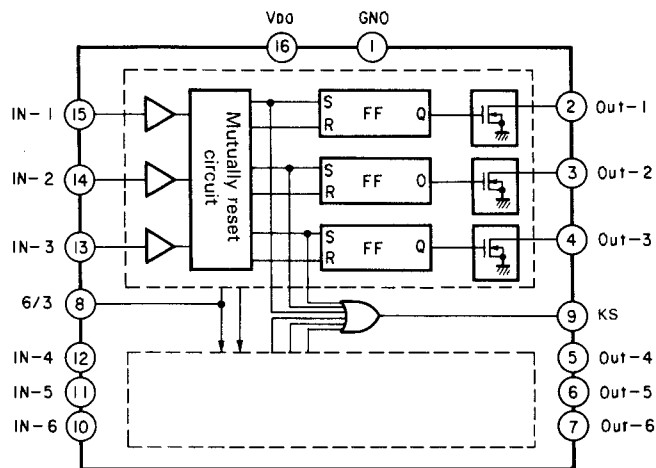
Pin No.	Terminal Name	Description
11	V _M	Bias voltage terminal: When a signal bias voltage is required, this terminal voltage (1/2 V _{DD}) is used.
12	V _{SS}	GND terminal
15	CE	When this terminal voltage is set to GND level, the IC is set to back-up mode and the output is in a floating state. Power consumption is reduced.
16	INIT	Initial terminal: If at "L", step is 9 and terminal IND5 changes to "H".
17	DN	When this terminal voltage is decreased, the step decreases and attenuation constant increases. Further, if kept at "L", attenuation constant increases continuously; however, the instant the terminal voltage is set to "H", the attenuation constant is held at that step.
18	UP	This terminal voltage functions reversely of that at DN terminal. When UP and DN are both at "L", UP terminal has a priority. Further, terminal voltages at UP and DN stop changing in response to MSB or LSB.
19	CR	This terminal is used to determine step speed. Resistors and capacitors are connected (open drain).
20	V _{DD}	Positive power supply terminal

•M51321P (Analog SW. IC)



SW.NC	S ₁	S ₂	S ₃
Cont. Volt (15)			
Vcc (12V)	1	1	1
OPEN (6V)	2	2	2
GND (0V)	3	3	3

•TC9135P (Six-ch Mutually Reset Type Touche Switch IC)

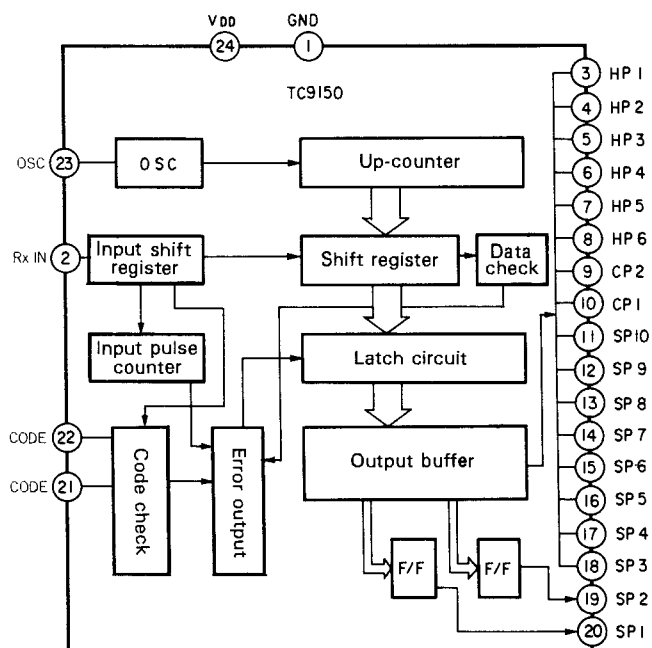


<Description of Terminal>

Pin Nos.	Symbols	Terminal Name	Function and Operation
10 to 15	IN-1 to IN-6	Input signal terminals:	When a voltage applied to any of input terminals IN-1 to IN-6 changes in level from "H" to "L", the Nch FET at the output terminal corresponding to the "L" input terminal is turned on, the other terminal outputs being turned off. These terminals can respond to both a mechanical key of feather touch type and a touch switch of touch sensor type.

Pin Nos.	Symbols	Terminal Name	Function and Operation
2 to 7	Out-1 to Out-6	Output terminals:	When a voltage applied to the corresponding input terminal changes to "L", the Nch FET at the output terminal is turned on to change the output level to "L". This output status is kept at "L" level, even if the corresponding input terminal is returned to "H". However, when an input signal is applied to the other channels, the released Nch FET is turned off, the output being returned to "open" status. A maximum of 30 mA current can be passed through the Nch FET at the output, so that it is possible to directly drive an LED or a small relay.
9	KS	Input detection signal terminal:	The KS terminal output is kept at "H" level only while a "L" level signal is applied to any of the input terminals IN1 to IN6.
8	6/3	6ch/3chx2 Switch input terminal:	When this terminal is at "H" level, all the flip-flops in the six internal circuits are connected to each other as a mutually reset circuit. However, when at "L" level, the circuit is separated into two 3ch-mutually-reset circuits for IN-1 to IN-3 and IN-4 to IN-6.
16	VDD		
1	GND		

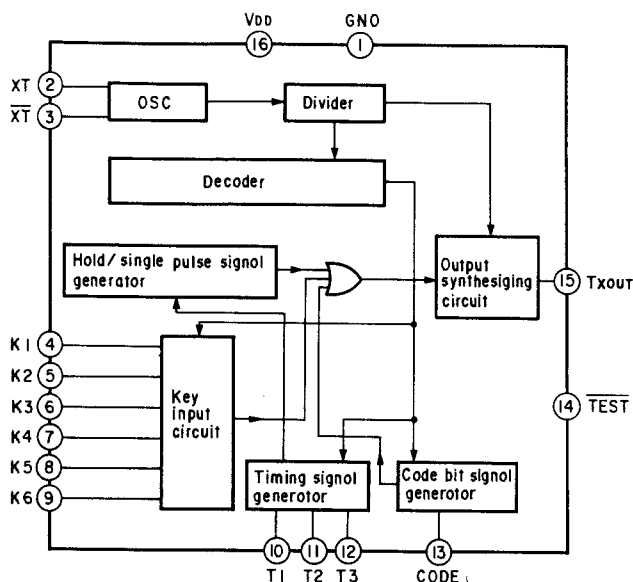
•TC9150P (Remote Control IC)



<Description of Terminal>

Pin Nos.	Symbols	Terminal Name	Function and Operation
1.	GND	Ground terminal:	
2.	Rx IN	Receive signal input terminal:	Command signal from which carrier signal is eliminated is inputted.
3 to 8.	HP ₁ to HP ₆	Continuous signal output terminals:	The terminal output is kept at "H" level while the receive signal is being inputted.
9, 10.	CP ₁ , CP ₂	Cyclic signal output terminals:	The terminal outputs are reversed whenever the receive signal is inputted.
11 to 20.	SP ₁ to SP ₁₀	Impulse output terminals:	The terminal output changes to "H" level for a fixed time period when the receive signal is inputted.
21, 22.	CODE	Code input terminals:	Codes determined by these terminals are compared with receiver codes for code check. If both match, the receive signal input is accepted.
23.	OSC	Oscillator terminal for timing:	The oscillator is of one-terminal type. A resistor and a capacitor are connected in parallel with this oscillator between OSC and GND.
24.	VDD	Power terminal:	

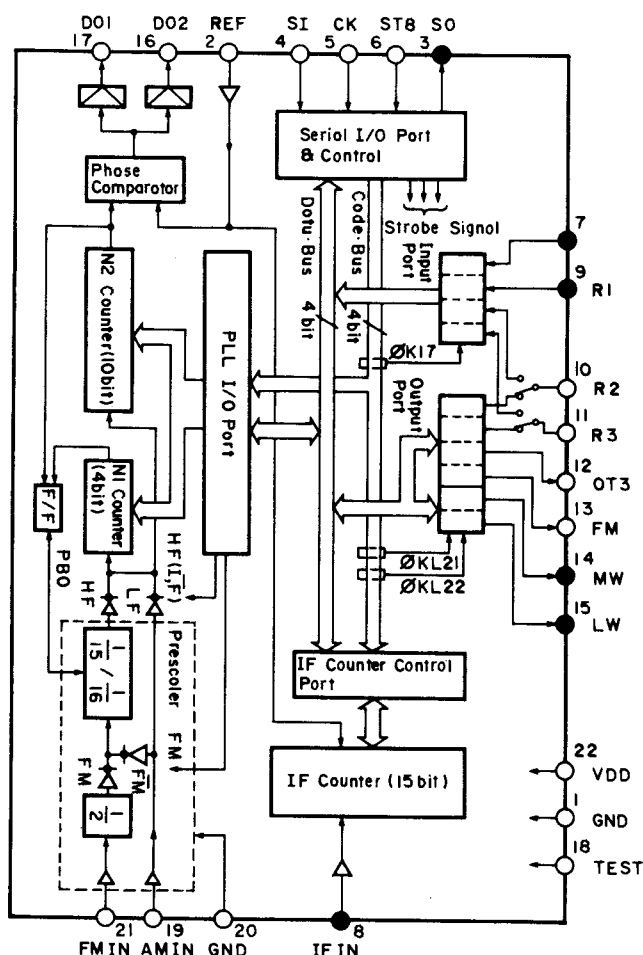
•TC9148P (Infrared Remote-Control Transmitter IC)



<Description of Terminals>

Pin No.	Terminal Name	Description
1, 16	GND, V _{DD}	Ground and power supply terminals. Power supply voltage is applied.
2, 3	XT, XT ⁻	Generator terminals. A 455 kHz ceramic oscillator (including a feedback resistor) is connected.
4 ~ 9	K ₁ ~ K ₆	Key input terminal. Signals from key-matrix keys are inputted. 18 keys are connectable by use of T ₁ to T ₃ and K ₁ to K ₆ multiplicably. (A pull-down resistor is included)
10 ~ 12	T ₁ ~ T ₃	Timing signal output terminal. Digit timing signals for key matrix are outputted.
13	CODE	Code bit input terminal. Codes are matched between transmission and reception.
14	TEST	Test terminal. Usually, this terminal is open.
15	T _{XOUT}	Transmitted signal output terminal. Transmitted signal is bits per cycle, being modulated by a 38 kHz carrier wave.

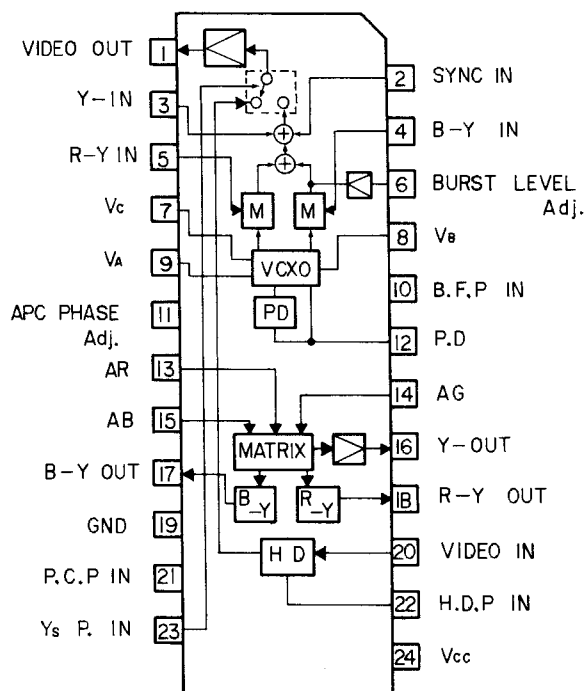
•TC-9182P (PLL Synthesizer IC)



<Description of Terminals>

Pin No.	Symbols on substrate	Functions
2	REF	Reference frequency signal input terminal
3	SO	Serial data output terminal
4	SI	Serial data input terminal
5	CK	Clock signal input terminal
6	STB	Strobe signal input terminal
		•Terminals to input/output serial data for frequency divider, IF counter and I/O port controller from/to TC-9303N-002 PLL synthesizer control IC.
8	IF _{IN}	Terminal to input IF signal for performing the automatic search stop.
9	R1	Terminals to input signals from the remote controller.
10	R2	
11	R3	7-kind key input instructions are available in combination with TC-9303N-002.
13	FM	Band selector signal output terminal
14	MW	
15	LW	
16	DO ₂	Terminals to output a signal from a phase comparator.
17	DO ₁	
18	TEST	Terminal to input a signal of test mode.
19	AM _{IN}	Terminal to input a signal from the AM local OSC.
20	GND	Ground terminal for prescaler
21	FM _{IN}	Terminal to input a signal from the FM local OSC.
22	V _{DD}	Power supply terminals. 5V ± 0.5V
1	GND	Ground terminal

•BA7230LS (NTSC method RGB Encoder IC)



1. Circuit Configuration

The BA7230LS is made up of a matrix circuit for RGB signals, a balanced modulator (two-phase quadrature modulation), an oscillator (VCXO) for a subcarrier frequency (3.58 MHz) synchronized with video input burst signal, a mixer of luminance signal and color difference signal, and a high-speed switcher circuit for switching the video input and the composite signal based on RGB inputs, to which RGB signals or color difference signals, SYNC, BFP(burst flag pulse), and PCP(pedestal clamp pulse) are inputted, and from which NTSC composite signal is outputted. Further, superimpose operation is enabled by switching the switcher circuit at a high speed.

In S-XV1000, it is possible to control video image hue by applying a color difference signal whose phase is varied to the color difference signal input terminal.

2. Description of Terminals

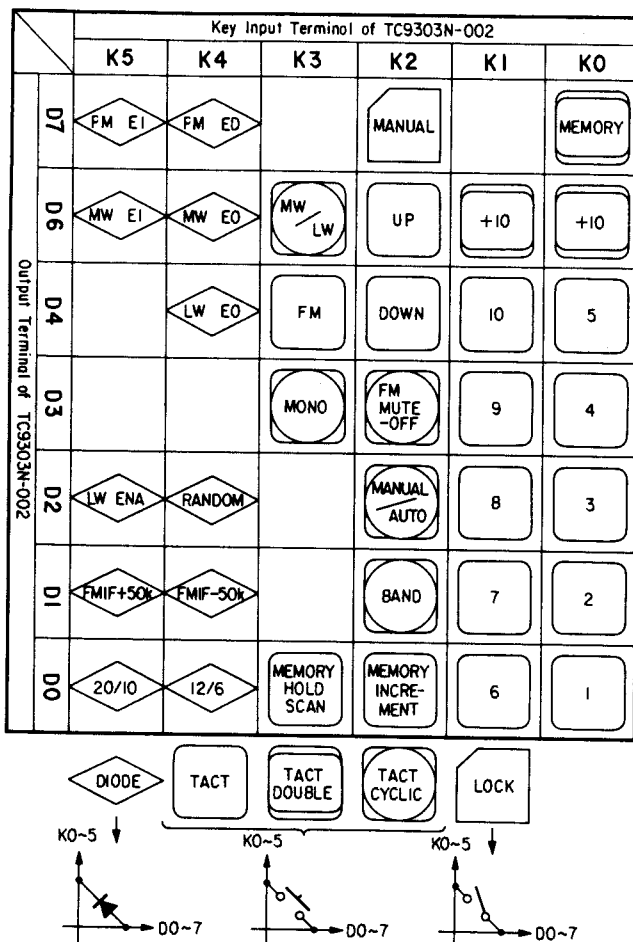
Pin No.	Terminal Name	Function and Operation
1	Output terminal:	NTSC composite signal is outputted ($V_o = 2V_p$ -p)
2	SYNC IN terminal	Horizontal synchronizing signal is inputted.
3	Luminance signal input terminal:	Luminance signal synthesized from RGB signals is inputted.
4	Color difference signal input terminal:	E_B - E_Y signal is inputted.
5	Color difference signal input terminal:	E_R - E_Y signal is inputted.
6	Color burst adjustment:	A semi-variable resistor is connected for adjusting the amplitude of color burst signal.
7	VCXO terminal:	
8	VCXO terminal	
9	VCXO terminal:	
10	BFP input terminal:	$\overline{BFP}$ (burst flag pulse) is inputted.
11	APC adjustment terminal:	A semi-variable resistor is connected for adjusting color burst phase.
12	Filter terminal:	A PLL filter is connected.
13	R signal input terminal:	R signal is inputted.
14	G signal input terminal:	G signal is inputted.
15	B signal input terminal:	B signal is inputted.
16	Luminance signal output terminal:	Luminance signal based on RGB signals is outputted.
17	Color difference signal output terminal:	E_B - E_Y signal is outputted.
18	Color difference signal output terminal:	E_R - E_Y signal is outputted.
19	GND terminal:	This terminal is connected to GND.
20	VIDEO IN terminal:	VIDEO signal is inputted.
21	PCP input terminal:	PCP (pedestal clamp pulse) is inputted.
22	HDP input terminal:	HDP (half down pulse) is inputted to reduce VIDEO signal by -5dB.
23	Ys input terminal:	Switching signals from switcher circuit are inputted.
24	Vcc terminal:	This terminal is connected to power supply.

*In S-XV1000, terminals from 13 to 18 and 22 are unused.

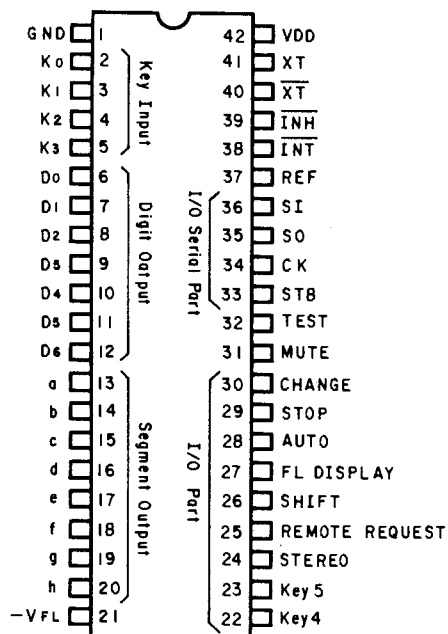
•Description of PLL Synthesizer control IC, TC-9303N-002

1. Various Key Matrix Functions

< Key Matrix >



< Chip Diagram >



< Reception Range >

	Desti-nation	KEY MATRIX E ₀ E ₁	Reception	IF	Step (kHz)
F M	USA	0 0	87.5 ~ 108.0	+	100
	EU	1 0	87.50 ~ 108.00	+	50
	Japan	0 1	76.0 ~ 90.0	—	100
	SABS	1 1	87.50 ~ 108.00	—	50
M W	USA	0 0	530 ~ 1610		10
	EU	1 0	522 ~ 1611		9
	SAUDI	0 1	531 ~ 1602		9
	Japan	1 1	522 ~ 1629		9
L W		0 —	153 ~ 281		1
		1 —	153 ~ 360		1

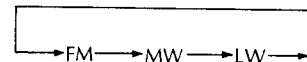
< FM IF Shift/Offset >

- a) When SHIFT port is at "H" input, FM IF is always offset as shown by Table below.

KEY MATRIX		LOCAL UP	LOCAL LOW
◊ -50kHz	◊ +50kHz	USA, EU	Japen, SABS
—	—	10.70 MHz	10.70 MHz
○	—	10.65	10.75
—	○	10.75	10.65
○	○	10.70	10.70

< Band Selection >

- a) When **FM** key is depressed in MW or LW, FM is set.
When **FM** key is depressed in FM band, only CHANGE output is set to "H".
- b) In the absence of **LW ENA** diode:
- When **MW/LW** key is depressed in FM, MW is set.
When **MW/LW** key is depressed in MW, only CHANGE output is set to "H".
 - When **BAND** key is depressed or when remote control BAND is requested, FM changes to MW or vice versa cyclically for each one-depression or for each request.
- c) In the presence of **LW ENA** diode:
- When **MW/LW** key is depressed in FM, FM changes to MW by the first depression, and thereafter LW changes to MW or vice versa cyclically for each depression.
 - When **BAND** key is depressed or when remote control BAND is requested, the reception band changes in sequence as shown below for each depression or for each request:



< Auto-Search Tuning >

Tuning operation stops in case where a stop signal is detected in Auto-Search Tuning operated by depressing **UP** or **DOWN** key.

< Manual Tuning >

- When **UP** or **DOWN** key is depressed, tuning advances one step for each depression (one step/one push).
- If the key is kept depressed for 0.5 seconds or more, one step/one push tuning changes to continuous tuning. However, when the key is released, the tuning operation stops.
- When tuning reaches one band edge, the tuning operation jumps to another band edge. After a stop interval of 5 seconds, tuning returns to one step/one push tuning or continuous tuning.

<Preset Memory>

b) Access to Preset Memory

Preset memory can be accessed by depressing any one of [M1] to [M10] keys or [Mn] and [+10] keys simultaneously.

Note) Accessable by depressing either or both of [+10] keys (D6-K0, D6-K1).

d) Writing

When [MEMORY] key is kept depressed, [MEMORY] and [CH] indications blink at 0.5-sec intervals.

When [Mn] key is depressed simultaneously with [MEMORY] key kept depressed, the present frequency is written in the memory, [MEMORY] indication going off and [CH] indication coming on.

<Memory Hold Scanning>

Broadcast is received in order while reading data stored in each preset memory 5 seconds by seconds.

<Memory Increment>

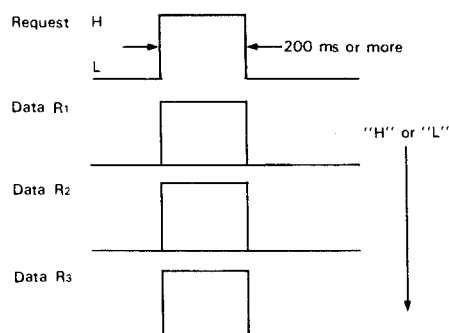
Broadcast is received while reading data stored in each preset memory in sequence.

Remote Control Request input port of TC-9303N and Data R₁, R₂, R₃ uboyr oier id TC-9182P.

2. I/O Port Functions

<Remote Control Input>

1. Main function
7-kind key input instructions are available in combination with TC 9182.
2. Input Port
Remote Control Request input port of TC-9303N and Data R₁, R₂, R₃ input port of TC-9182P.
3. Input signals



These request signals are always monitored. All the key input instructions are inhibited when a request signal is at "H". Remote control instructions have priority over others.

A continuous signal is usable for manual up/down tuning operation.

4. Functions

Input Port			Function	
R ₁	R ₂	R ₃		
1	1	1	NOP	Only CHANGE Output
1	1	0	BAND	
0	1	0	MEMORY INCREMENT	
0	0	1	MONO↔STEREO	Cyclic
1	0	1	MUTE OFF↔ON	Cyclic
0	1	1	DOWN	Continuous
0	0	0	UP	Continuous
1	0	0	MANUAL↔AUTO	Cyclic

(a) NOP is an input function for designating tuners and outputs only a CHANGE output.

(b) The other functions are the same as these of TACT input key.

<Mute Output>

System Mute Time

1. When INH changes from "L" to "H": 1.5 sec
2. When band is switched: 1.0 sec
3. When memory is accessed (in the same band): 0.5 ~ 1 sec
4. In FM MANUAL tuning: 0.5 sec
5. In MW, LW MANUAL tuning: 0.2 sec
6. In AUTO-Tuning Stop: 0.5 sec
7. When INH changes from "H" to "L": 0.1 sec

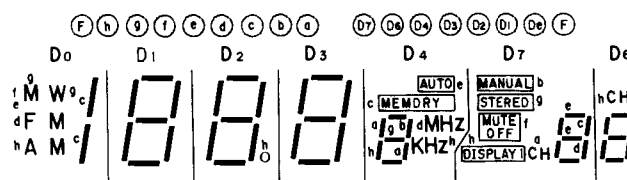
<CHANGE Output> (For Compuselector signal)

1. When INH changes from "L" to "H".
2. When each input key is depressed normally.
3. When a band key corresponding to the presently received band is depressed.
4. When remote control REQUEST changes to "H" (inclusive of NOP).



Note) CHANGE is not outputted when INH changes from "H" to "L".

<Indication by Digits and Segments>



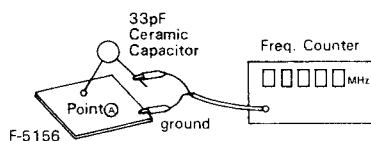
		Digit Output						
		D0	D1	D2	D3	D4	D7	D6
Segment Output	a	—	a	a	a	5	CH	a
	b	—	b	b	b	2	MANUAL	b
	c	8	c	c	c	MEMORY	7	e
	d	FM	d	d	d	MHz	5	d
	e	MW	e	e	e	AUTO	7	e
	f	MW	f	f	f		MUTE OFF	f
	g	MW	g	g	g	8	STEREO	g
	h	AM		●		kHz	DISPLAY1	CH

3. ADJUSTMENTS

3-1. Video Color Corrector Circuit Adjustment

1) Sub Carrier Frequency Adjustment

Fig. 3-1



MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
Between Point (A) (rX011) through 33pF Capacitor & Earth Freq. Counter •See Fig. 3-1 and Fig. 3-10 on page 17	rTC11 (F-5156)	3.579545 MHz $\pm$ 100Hz	VCR VIDEO IN No Input

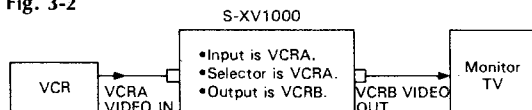
2) Color Corrector Adjustment

Note: 1. Required Test Equipments

- VHS Type Video Cassette Recorder (VCR) for NTSC system
- Test Tape MH-1 or MH-2
- Monitor TV (or Home TV with RF Tuner)

2. Connect VCR and monitor TV as shown Fig. 3-2

Fig. 3-2



Procedure

1. FADER Switch..... IN
2. COLOR CORRECTOR Switch..... OFF
3. Reproduce color bar signals of a test tape by VCR.
4. Check hues of test pattern color mode.

Fig. 3-3

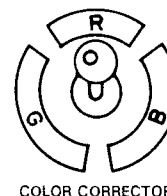
•Hues of test pattern color mode

White 75%	Yellow	Light blue	Green	Pink	Red	Blue
Dark brown	Dark blue	White (100%)				Black

Note: The hue of Test Pattern differs depend on Monitor TV.

5. Set COLOR CORRECTOR Knob to R Position as shown Fig. 3-4.

Fig. 3-4



6. COLOR CORRECTOR Switch..... ON
7. Adjust the variable resistor rVR14 so that white color (100%)
*part of TV picture changes to pink

3-2. Driver Circuit Adjustment (See Top View on Page 27)

Note: 1. Room Temperature..... 18°C ~ 28°C

2. Master Volume Minimum

3. For this adjustment, run the unit for more than 2 minutes after the power is switched ON.

STEP	SUBJECT	MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
1.	Bias Current Adj. L-CH	Between emitter terminals of kQ4L and kQ5L (Across kR19L) DC Volt Meter	kVR1L (F-5162)	DC 20mV $\pm$ 1mV	•Before turning ON power switch, turn kVR1L, R clockwise. •This bias current value into voltage voltage by ohms law.
2.	Bias Current Adj. R-CH	Between emitter terminals of kQ4R and kQ5R (Across kR19R) DC Volt Meter	kVR1R (F-5162)		

3-3. FM Adjustment (See Fig. 3-13 on Page 17)

Fig. 3-5

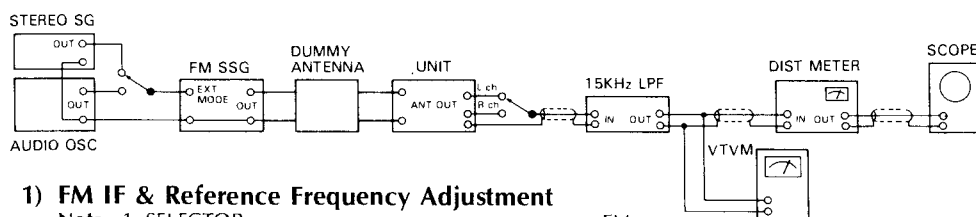
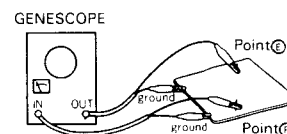


Fig. 3-6



1) FM IF & Reference Frequency Adjustment

Note: 1. SELECTOR..... FM
2. FM MODE..... MONO

STEP	SUBJECT	FEED SIGNAL		MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
		FROM	TO				
1.	IF Coil Adj.	98MHz ANT Input 20dBf (14.8dB), 1kHz (100% MOD.), FM SSG	ANT terminal 300Ω	Between Point (B) (Pin 13 of d1C1) & Earth DC Volt Meter •See Fig. 3-13 on page 17	IFT Coil (Front-end, F-5167)	Max. DC Volt	
2.	Discriminator Coil Adj. In case of using Genescope	1 No Input	—	Between Point (C) (Pin 7 of d1C1) & Point (D) (Pin 10 of d1C1) DC Volt Meter •See Fig. 3-13 on page 17	dT2 (F-4853)	DC 0V ± 30mV	•Repeat procedures as stated in subject 1 & 2.
		2 Output 80dB, Genescope	Point (E) (dCF1)	Between Point (F) (Pin 6 of d1C1) & Earth •See Fig. 3-13 on page 17	dT3 (F-4853)	Steep linearity of S curve. Make symmetrical S curve.	
	Discriminator Coil Adj. In case of using Dist meter	1 No Input	—	Between Point (C) (Pin 7 of d1C1) & Point (D) (Pin 10 of d1C1) DC Volt Meter •See Fig. 3-13 on page 17	dT2 (F-4853)	DC 0V ± 30mV	•Repeat procedures as stated in subject 1 & 2.
		2 98MHz ANT Input 65dBf (59.8dB), 1kHz (100% MOD.), FM SSG	ANT terminal 300Ω	•TAPE REC OUT L- CH or R-CH Dist Meter & SCOPE	dT3, (F-4853)	Min. THD	

•ADJUSTMENT FOR FM

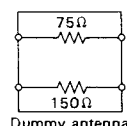
There are two kind in indication of FM SSG output attenuator

1. Attenuator with marking of 75Ω open open indication type.
2. Attenuator with marking of 75Ω load or close load or close indication type.

FM SSG output level in this FM adjustment are described as open indication type.

To feed FM signal, a dummy antenna circuit as Fig. 3-7 must be connected between FM SG output and ANT terminal (300Ω) of the unit.

Fig. 3-7



- The following table shows relations among FM SG attenuator indication (dB), available power ratio (dBf) and antenna terminal voltage (dB/μV) in each indication type.

	FM SG Attenuator Indication	Available Power Ratio	Antenna Terminal Voltage
Open indication type	0 dB 66 dB	-0.8 dBf 65.2 dBf	-6 dB/μV 60 dB/μV
Load or close indication type	0 dB 60 dB	5.2 dBf 65.2 dBf	0 dB/μV 60 dB/μV

2) FM STEREO Adjustment (See Fig. 3-14 on Page 17)

1. FM MODE..... AUTO

STEP	SUBJECT	FEED SIGNAL		MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
		FROM	TO				
1.	PLL VCO Adj.	98MHz ANT Input 65dBf (59.8dB), FM SSG, Pilot 19kHz (9% MOD.), R or L MODE 1kHz + Pilot (100% MOD.), STEREO SG	ANT terminal 300Ω	Stereo Indicator	dVR1 (F-4854)	Light indicator	•Adjust the dVR1 within center of light level
	PLL VCO Adj. In case of using Freq.	98MHz ANT Input 65dBf (59.8dB), FM SSG, No MOD.	Same as above	Between PointⓈ (Pin 12 of dIC2) & Earth Freq. Counter •See Fig. 3-14 on page 17	dVR1 (F-4854)	19kHz ± 25Hz	
2.	Muting level Adj.	98MHz ANT Input 25dBf (19.8dB), FM SSG, Pilot 19kHz (9% MOD.), L or R MODE 1kHz + Pilot (100% MOD.), STEREO SG.	Same as above	Stereo indicator TAPE REC OUT L-CH or R-CH VTVM & SCOPE	fVR1 (F-5167)	Stereo indicator turns ON or Output Signal comes out	

3-4. AM Adjustment (See Fig. 3-11 & Fig. 3-12 on Page 17)

Fig. 3-8

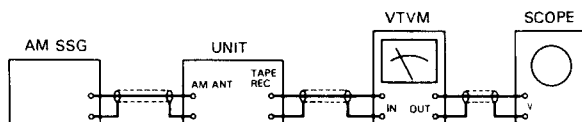
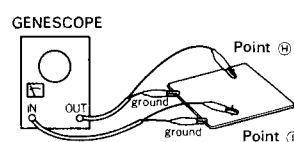


Fig. 3-9



1) AM IF Adjustment & MW (AM) Tuning Adjustment

- Note: 1. SELECTOR..... AM
2. Connect AM loop antenna to AM antenna terminal.

STEP	SUBJECT	FEED SIGNAL		MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
		FROM	TO				
1.	IF Coil Adj.	Genescope Output 60dB	PointⓈ (Pin 2 of eIC1) (F-4847)	Between PointⓈ (Pin 12 of eIC1) & Earth •See Fig. 3-12 on page 17	eL1 (F-4847)	Max, Waveform	
2.	522kHz (or 520kHz) Tuning Adj.	No Input	—	Between PointⓈ (eR1) & Earth DC Volt Meter •See Fig. 3-11 on page 17	eT2 (F-5167)	1V ± 0.1V	•Repeat procedures as stated in subject 2 & 3.
3.	1602kHz (or 1610kHz) Tuning Adj.	No Input	—	Same as above	eTC2 (F-5167)	8V ± 0.1V	
4.	603kHz (or 600kHz) RF Adj.	603kHz (or 600kHz) ANT Input 30dB 400Hz (30% MOD.), AM SSG	ANT terminal	TAPE REC OUT L-CH or R-CH VTVM & SCOPE	eT1 (F-5167)	Max. Output	
5.	1404kHz (or 1400kHz) RF Adj.	1404kHz (or 1400kHz) ANT Input 30dB 400Hz (30% MOD.), AM SSG	Same as above	TAPE REC OUT L-CH or R-CH VTVM & SCOPE	eTC1 (F-5167)	Max. Output	

•Abbreviations

Equipment		Others	
AM FM Generator Oscilloscope.....	Genescope	Antenna.....	ANT.
AM Standard Signal Generator.....	AM SSG	Modulation.....	MOD.
FM Standard Signal Generator.....	FM SSG	Total Harmonic Distortion.....	T.H.D.
FM Stereo Generator.....	Stereo SG		
Oscilloscope.....	Scope		
Audio Oscillator.....	Audio Osc.		
Distortion Meter.....	Dist. Meter		

Fig. 3-10 F-5156 Main Board

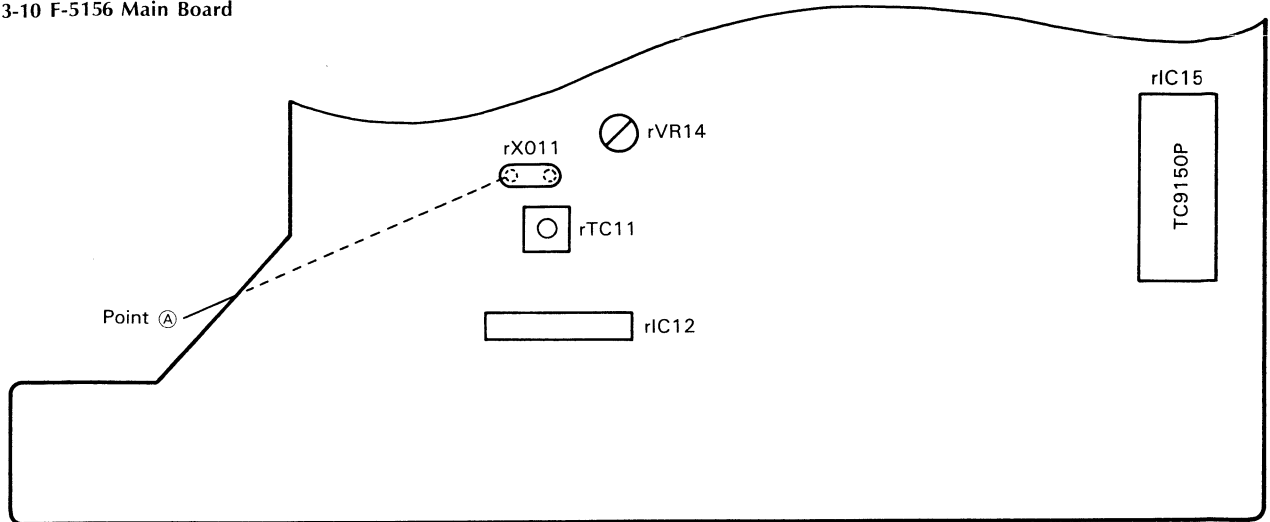


Fig. 3-11 F-5167 Tuner Board

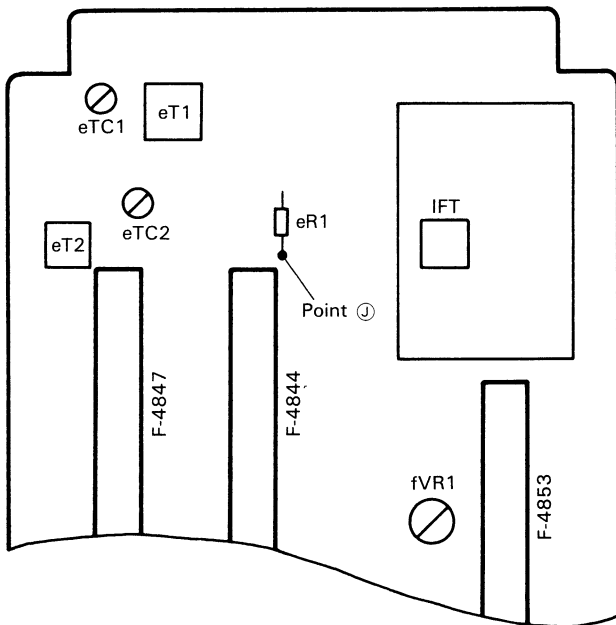


Fig. 3-12 F-4847 AM IF Amp Board

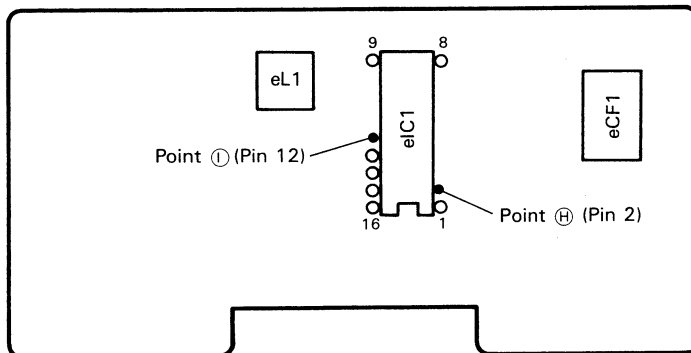


Fig. 3-13 F-4853 FM IF Amp Board

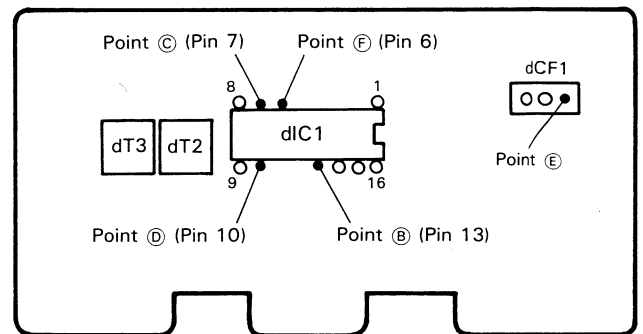
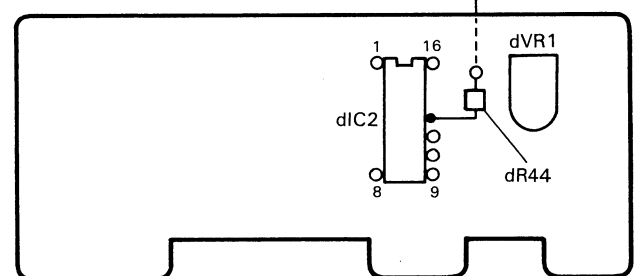
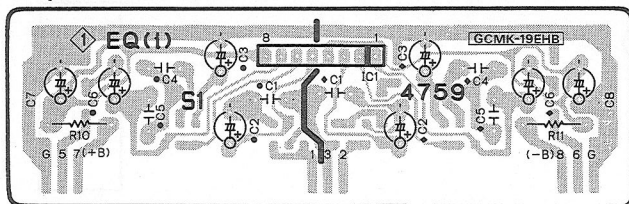


Fig. 3-14 F-4854 FM MPX Board

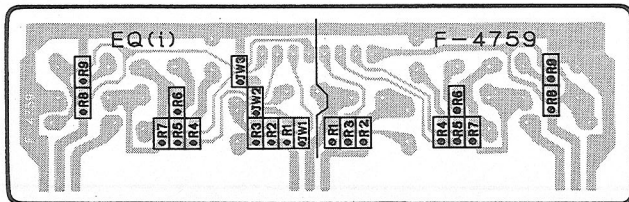


4. PARTS LOCATION & PARTS LIST

4-1. F-4759 Equalizer Amp. Board (Stock No. 00852601) Component Side



Pattern Side <Chip Parts>

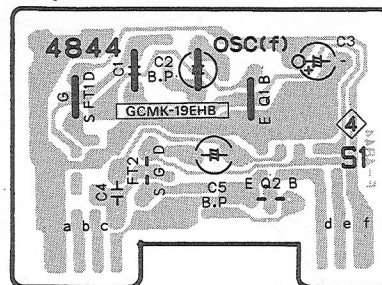


•Note: On this circuit board, the right channel is specified by "●" mark on top of the parts No.

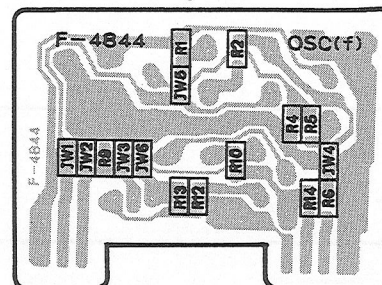
Parts List

Parts No.	Stock No.	Description
•IC		
iIC1	46078900	M5218L
iJW1	46741100	Cross Conductor (Chip)
iJW2	46741100	Cross Conductor (Chip)
iJW3	46741100	Cross Conductor (Chip)
iR1	46752400	100kΩ 1/8W Chip R.
iR2	46746800	470Ω 1/8W Chip R.
iR3	46752400	100kΩ 1/8W Chip R.
iR4	46746900	510Ω 1/8W Chip R.
iR5	46746900	510Ω 1/8W Chip R.
iR6	46750800	22kΩ 1/8W Chip R.
iR7	46753500	300kΩ 1/8W Chip R.
iR8	46746800	470Ω 1/8W Chip R.
iR9	46752400	100kΩ 1/8W Chip R.
ΔiR10	46229000	100Ω 1/2W N.I.R.
ΔiR11	46229000	100Ω 1/2W N.I.R.
iR12	46752400	100kΩ 1/8W Chip R.
iC4	46282400	3300pF 50V F.C.
iC5	46283000	0.012μF 50V F.C.

4-3. F-4844 Loop Filter Board (Stock No. 00929401) Component Side



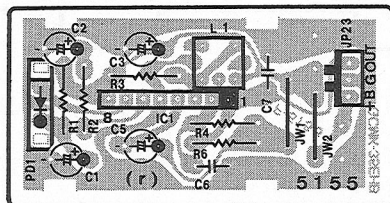
Pattern Side <Chip Parts>



Parts List

Parts No.	Stock No.	Description
•Transistor		
fQ2	46367101	2SC2603
	or 46367301	2SC2458
	or 46391901	2SC2785
•FET		
fFT2	46643501	2SK163-K2
	or 46643502	2SK163-L1
	or 46643601	2SK117-Y
	or 46643602	2SK117-GR
fJW1 ~ 6	46741100	Cross Conductor (Chip)
fR9	46750800	22kΩ 1/8W Chip R.
fR10	46748000	1.5kΩ 1/8W Chip R.
fR12	46746400	330Ω 1/8W Chip R.
fR13	46746000	220Ω 1/8W Chip R.
fR14	46749600	6.8kΩ 1/8W Chip R.
fC5	48103500	2.2μF 50V E.B.

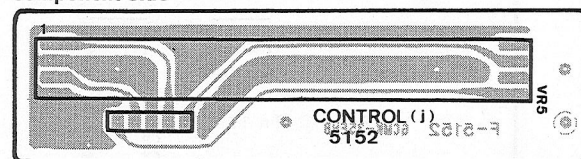
4-2. F-5155 Remote Control Receiver Board Component Side (Stock No. 00928101)



Parts List

Parts No.	Stock No.	Description
•IC		
rIC1	48159100	LA7224
rPD1	46706900	Pin Photo Diode PH302
rL1	48179100	Coil (38kHz)

4-4. F-5152 SURROUND EFFECT Volume Board Component Side

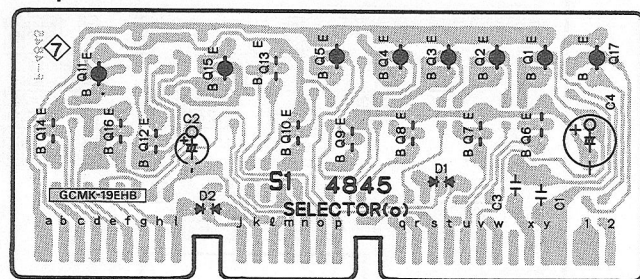


Parts List

Parts No.	Stock No.	Description
jVR5	48315300	10kΩ (B) V.R., AV SURROUND EFFECT

4-5. F-4845 AM/FM Band Selector Board (Stock No. 00929501)

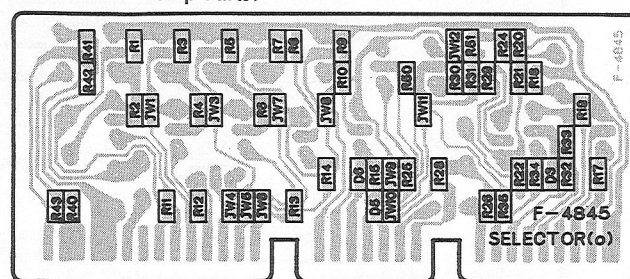
Component Side



Parts List

Parts No.	Stock No.	Description
• Transistor		
oQ1	46367001	2SA1115
	or 46367201	2SA1048
	or 46392001	2SA1175
oQ4	46367001	2SA1115
	or 46367201	2SA1048
	or 46392001	2SA1175
oQ5	46367001	2SA1115
	or 46367201	2SA1048
	or 46392001	2SA1175
oQ6	46367101	2SC2603
	or 46367301	2SC2458
	or 46391901	2SC2785
oQ9	46367101	2SC2603
	or 46367301	2SC2458
	or 46391901	2SC2785
oQ10	46367101	2SC2603
	or 46367301	2SC2458
	or 46391901	2SC2785
oQ11	46367001	2SA1115
	or 46367201	2SA1048
	or 46392001	2SA1175
oQ12	46367101	2SC2603
	or 46367301	2SC2458
	or 46391901	2SC2785
oQ13	46367101	2SC2603
	or 46367301	2SC2458
	or 46391901	2SC2785
oQ14	46367101	2SC2603
	or 46367301	2SC2458
	or 46391901	2SC2785
oQ15	46367001	2SA1115
	or 46367201	2SA1048
	or 46392001	2SA1175
oQ16	46367101	2SC2603
	or 46367301	2SC2458
	or 46391901	2SC2785
oQ17	46367101	2SC2603
	or 46367301	2SC2458
	or 46391901	2SC2785

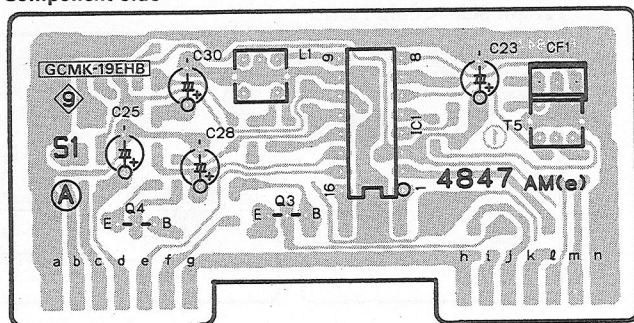
Pattern Side <Chip Parts>



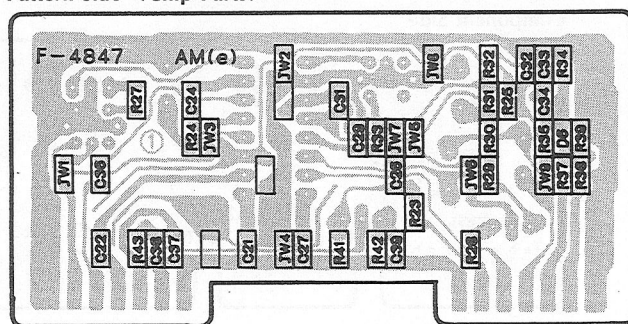
Parts No.	Stock No.	Description
• Diode		
oD1	46464000	MC921
oD2	46464000	MC921
oD3	46852000	RLS-73 (Chip)
oD5	46852000	RLS-73 (Chip)
oD6	46852000	RLS-73 (Chip)
oJW1 ~ 11	46741100	Cross Conductor (Chip)
oR1	46749200	4.7k Ω 1/8W Chip R.
oR2	46750000	10k Ω 1/8W Chip R.
oR7	46749200	4.7k Ω 1/8W Chip R.
oR8	46750000	10k Ω 1/8W Chip R.
oR9	46749200	4.7k Ω 1/8W Chip R.
oR10	46750000	10k Ω 1/8W Chip R.
oR11	46750000	10k Ω 1/8W Chip R.
oR14	46750000	10k Ω 1/8W Chip R.
oR15	46751600	47k Ω 1/8W Chip R.
oR17	46750000	10k Ω 1/8W Chip R.
oR18	46748200	1.8k Ω 1/8W Chip R.
oR19	46747000	560 Ω 1/8W Chip R.
oR20	46750800	22k Ω 1/8W Chip R.
oR21	46749200	4.7k Ω 1/8W Chip R.
oR22	46749200	4.7k Ω 1/8W Chip R.
oR25	46751600	47k Ω 1/8W Chip R.
oR26	46752400	100k Ω 1/8W Chip R.
oR28	46752400	100k Ω 1/8W Chip R.
oR29	46749200	4.7k Ω 1/8W Chip R.
oR30	46749000	3.9k Ω 1/8W Chip R.
oR31	46754600	820k Ω 1/8W Chip R.
oR32	46750400	15k Ω 1/8W Chip R.
oR33	46752200	82k Ω 1/8W Chip R.
oR34	46750000	10k Ω 1/8W Chip R.
oR35	46750000	10k Ω 1/8W Chip R.
oR40	46748800	3.3k Ω 1/8W Chip R.
oR41	46747600	1k Ω 1/8W Chip R.
oR42	46748800	3.3k Ω 1/8W Chip R.
oR43	46747600	1k Ω 1/8W Chip R.
oR50	46747400	820 Ω 1/8W Chip R.
oR51	46750800	22k Ω 1/8W Chip R.

4-6. F-4847 AM IF Amp. Board (Stock No. 00879001)

Component Side



Pattern Side <Chip Parts>



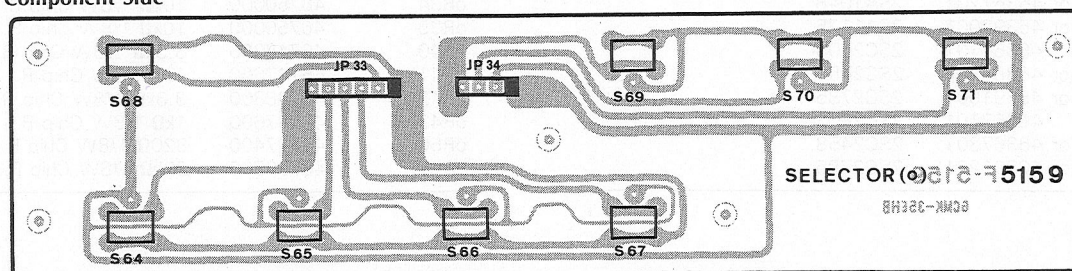
Parts List

Parts No.	Stock No.	Description
•Transistor		
eQ3	46202901	2SC1674
eQ4	46367101	2SC2603
	or 46367301	2SC2458
	or 46391901	2SC2785
•IC		
eIC1	03608000	LA1240
•Diode		
eD6	46852000	RLS-73 (Chip)
eJW2~9	46741100	Cross Conductor (Chip)
eR23	46751600	47k Ω 1/8W Chip R.
eR24	46747600	1k Ω 1/8W Chip R.
eR25	46745200	100 Ω 1/8W Chip R.
eR27	46744400	47 Ω 1/8W Chip R.
eR28	46750800	22k Ω 1/8W Chip R.
eR29	46748400	2.2k Ω 1/8W Chip R.
eR30	46750000	10k Ω 1/8W Chip R.
eR31	46750000	10k Ω 1/8W Chip R.
eR32	46747600	1k Ω 1/8W Chip R.
eR33	46745200	100 Ω 1/8W Chip R.
eR34	46752400	100k Ω 1/8W Chip R.

Parts No.	Stock No.	Description
eR35	46751800	56k Ω 1/8W Chip R.
eR37	46751600	47k Ω 1/8W Chip R.
eR38	46754400	680k Ω 1/8W Chip R.
eR39	46753200	220k Ω 1/8W Chip R.
eR41	46750800	22k Ω 1/8W Chip R.
eR42	46750000	10k Ω 1/8W Chip R.
eR43	46749200	4.7k Ω 1/8W Chip R.
eC21	46794300	1000pF 50V Chip C.
eC22	46854500	22000pF 50V Chip C.
eC24	46854500	22000pF 50V Chip C.
eC26	46854500	22000pF 50V Chip C.
eC27	46854500	22000pF 50V Chip C.
eC29	46795500	10000pF 50V Chip C.
eC31	46795500	10000pF 50V Chip C.
eC32	46854900	47000pF 50V Chip C.
eC33	46794300	1000pF 50V Chip C.
eC34	46854900	47000pF 50V Chip C.
eC36	46795500	10000pF 50V Chip C.
eC37	46795500	10000pF 50V Chip C.
eC38	46854500	22000pF 50V Chip C.
eC39	46854900	47000pF 50V Chip C.
eT5	48069800	Ceramic Filter CFLZ450
eL1	46369600	AM IF Coil

4-7. F-5159 Selector Board

Component Side

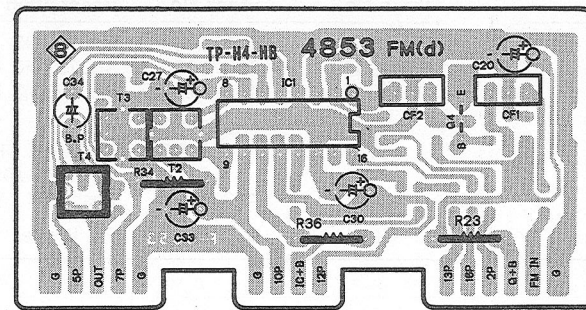


Parts List

Parts No.	Stock No.	Description
oS64	48306900	Push SW., TUNER
oS65	48306900	Push SW., CD
oS66	48306900	Push SW., TAPE
oS67	48306900	Push SW., PHONO
oS68	48306900	Push SW., FM/AM
oS69	48306900	Push SW., VCR-A
oS70	48306900	Push SW., VCR-B
oS71	48306900	Push SW., VCR-C

4-8. F-4853 FM IF Amp. Board (Stock No. 00903301)

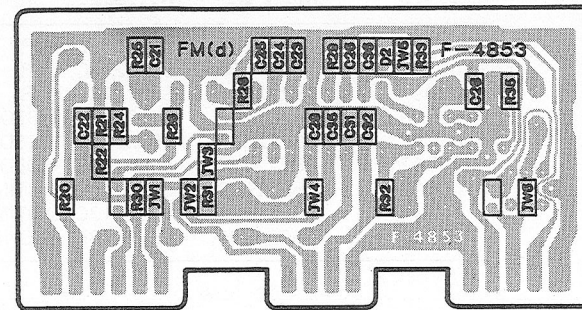
Component Side



Parts List

Parts No.	Stock No.	Description
• Transistor		
dQ4	46393201	2SC2786
• IC		
dIC1	07191200	LA1231N
• Diode		
dD2	46852000	RLS-73 (Chip)
dJW1~6	46741100	Cross Conductor (Chip)
dR20	46745800	180Ω 1/8W Chip R.
dR21	46747000	560Ω 1/8W Chip R.
dR22	46747600	1kΩ 1/8W Chip R.
Δ dR23	46228700	56Ω 1/2W N.I.R.
dR24	46745200	100Ω 1/8W Chip R.
dR25	46747400	820Ω 1/8W Chip R.
dR26	46746600	390Ω 1/8W Chip R.
dR28	46746400	330Ω 1/8W Chip R.
dR29	46752400	100kΩ 1/8W Chip R.
dR30	46750000	10kΩ 1/8W Chip R.
dR31	46750200	12kΩ 1/8W Chip R.
dR32	46750400	15kΩ 1/8W Chip R.

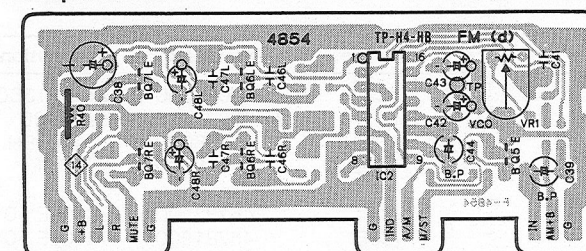
Pattern Side < Chip Parts >



Parts No.	Stock No.	Description
dR33	46752400	100kΩ 1/8W Chip R.
dR35	46748800	3.3kΩ 1/8W Chip R.
Δ dR36	46228700	56Ω 1/2W N.I.R.
dC21	46854500	0.022μF 50V Chip C.
dC22	46854900	0.047μF 50V Chip C.
dC23	46854900	0.047μF 50V Chip C.
dC24	46854900	0.047μF 50V Chip C.
dC25	46854900	0.047μF 50V Chip C.
dC26	46778100	100pF 50V Chip C.
dC28	46854500	0.022μF 50V Chip C.
dC29	46854500	0.022μF 50V Chip C.
dC31	46854900	0.047μF 50V Chip C.
dC32	46854900	0.047μF 50V Chip C.
dC34	48102400	4.7μF 25V E.B.
dC35	46854500	0.022μF 50V Chip C.
dCF1	07259700	Ceramic Filter SFE10.7MS2
	or 07259701	
dCF2	07259700	Ceramic Filter SFE10.7MS2
	or 07259701	
dT2	48072100	FM IF Coil
dT3	48072200	FM IF Coil

4-9. F-4854 FM MPX Board (Stock No. 00879701)

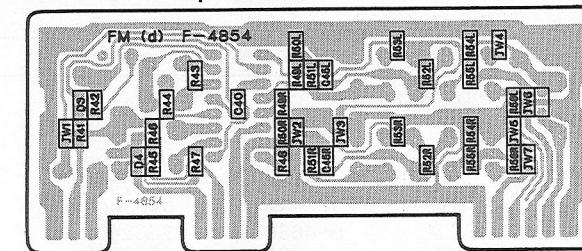
Component Side



Parts List

Parts No.	Stock No.	Description
• Transistor		
dQ5	46367101	2SC2603
	or 46367301	2SC2458
	or 46391901	2SC2785
dQ6	46367101	2SC2603
	or 46367301	2SC2458
	or 46391901	2SC2785
dQ7	46540801	2SC2878
	or 46604301	2SC3327
• IC		
dIC2	48169300	BA1332
• Diode		
dD3	46852000	RLS-73 (Chip)
dD4	46852000	RLS-73 (Chip)
dJW1~7	46741100	Cross Conductor (Chip)
Δ dR40	46228200	22Ω 1/2W N.I.R.
dR41	46751200	33kΩ 1/8W Chip R.
dR42	46750000	10kΩ 1/8W Chip R.
dR43	46747600	1kΩ 1/8W Chip R.

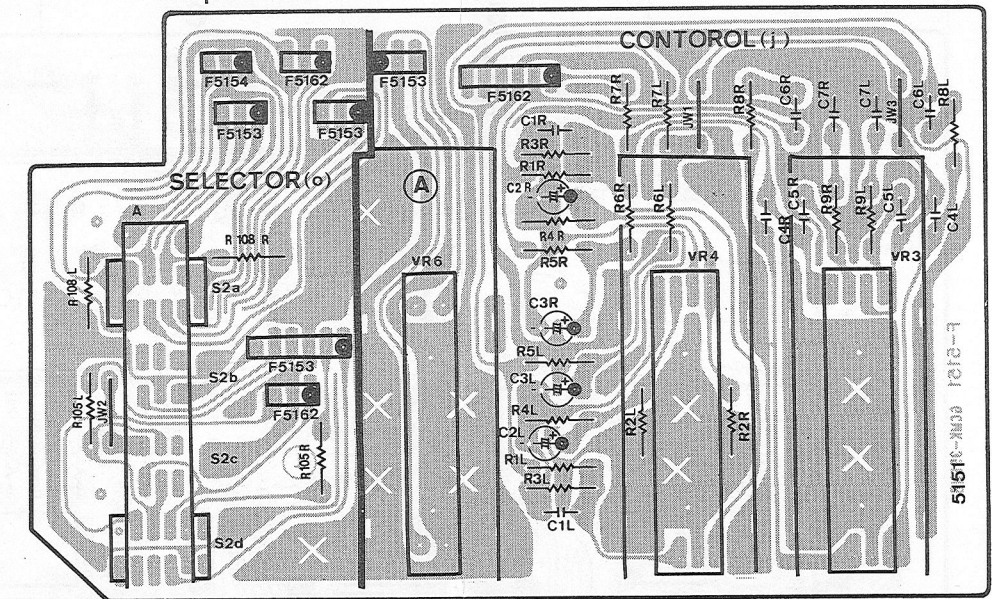
Pattern Side < Chip Parts >



Parts No.	Stock No.	Description
dR44	46750000	10kΩ 1/8W Chip R.
dR45	46750000	10kΩ 1/8W Chip R.
dR46	46750200	12kΩ 1/8W Chip R.
dR47	46751600	47kΩ 1/8W Chip R.
dR48	46747400	820Ω 1/8W Chip R.
dR49	46749200	4.7kΩ 1/8W Chip R.
dR50	46748800	3.3kΩ 1/8W Chip R.
dR51	46747600	1kΩ 1/8W Chip R.
dR52	46747200	680Ω 1/8W Chip R.
dR53	46745400	120Ω 1/8W Chip R.
dR54	46752000	68kΩ 1/8W Chip R.
dR55	46747800	1.2kΩ 1/8W Chip R.
dR56	46748800	3.3kΩ 1/8W Chip R.
dC39	48102400	4.7μF 25V E.B.
dC40	46854900	0.047μF 50V Chip C.
dC44	48103400	1μF 50V E.B.
dC45	46778300	120pF 50V Chip C.
dC46	46283100	0.015μF 50V F.C.
dC47	46282800	8200pF 50V F.C.
dVR1	07241200	5kΩ (B) S.V.R., V.C.O. adj.

4-10. F-5151 Tone Control Board

Component Side

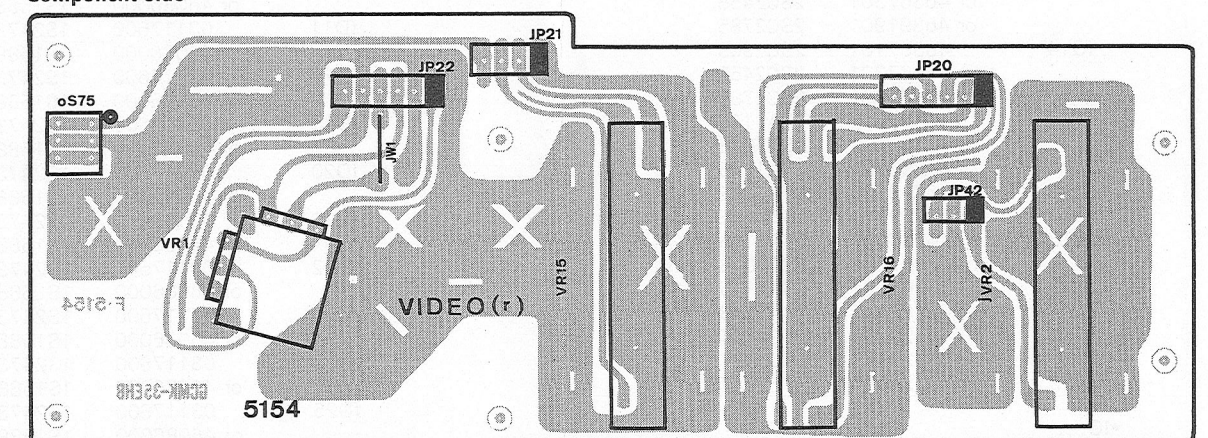


Parts List

Parts No.	Stock No.	Description	Parts No.	Stock No.	Description
jC1	46283600	0.039μF 50V F.C.	jVR3	48315400	50kΩ (C) V.R., TREBLE
jC2	46937000	0.22μF 50V E.B.	jVR4	48315400	50kΩ (C) V.R., BASS
jC4	46281800	1000pF 50V F.C.	jVR6	48315800	100kΩ (B) V.R., SUPER BASS
jC5	46282800	8200pF 50V F.C.			SYNTH
jC6	46282700	6800pF 50V F.C.	oS3	48315100	Push SW., SURROUND

4-11. F-5154 COLOR CORRECTOR & FADER Volume Board

Component Side

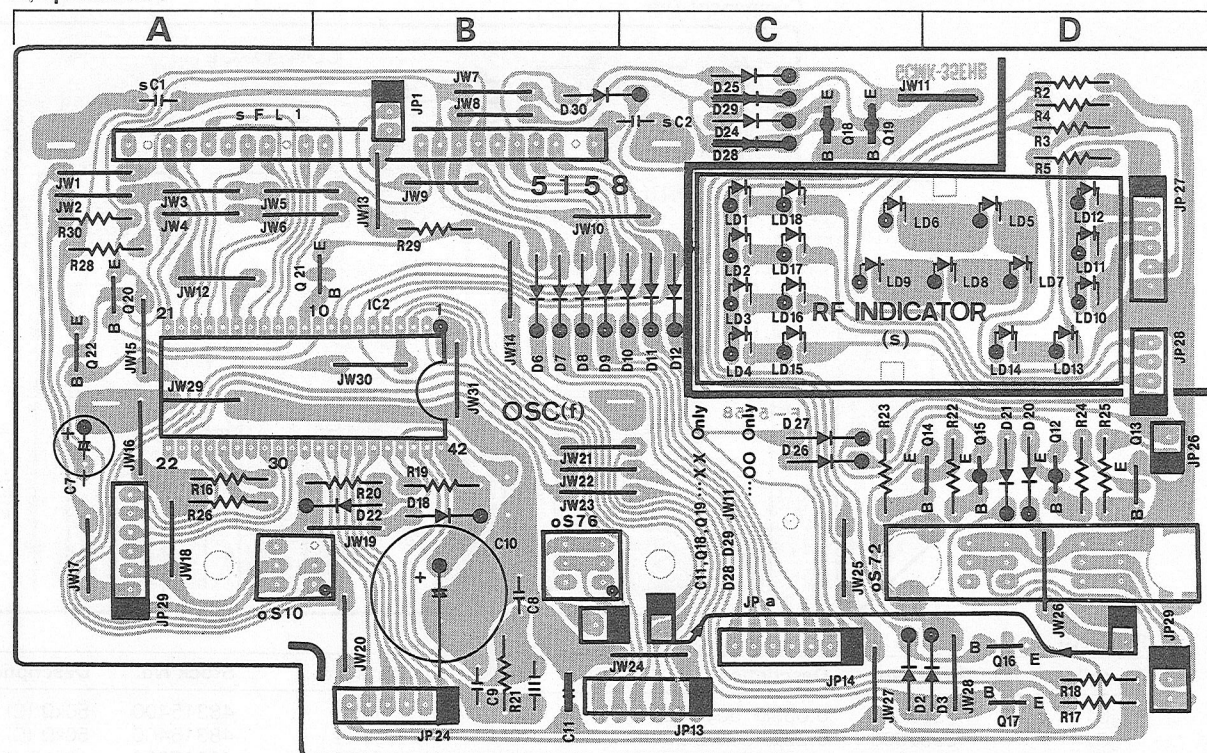


Parts List

Parts No.	Stock No.	Description
jVR2	48315500	250kΩ V.R., BALANCE
oS75	46556400	Push SW., COLOR CORRECTOR
rVR16	48315700	150kΩ (B) V.R., AUDIO FADER
rVR11	48316200	1kΩ (B) V.R., COLOR COR-
		RECTOR
rVR15	48315600	1kΩ (B) V.R., VIDEO FADER

4-12. F-5158 PLL Synthesizer Controller & Indicator Board (Stock No. 00928401)

Component Side



Parts List

Parts No.	Stock No.	Description
• Transistor		
fQ12	46367001	2SA1115
	or 46367201	2SA1048
	or 46392001	2SA1175
fQ13	46367101	2SC2603
	or 46367301	2SC2458
	or 46391901	2SC2785
fQ14	46367101	2SC2603
	or 46367301	2SC2458
	or 46391901	2SC2785
fQ15	46367001	2SA1115
	or 46367201	2SA1048
	or 46392001	2SA1175
fQ16	46719900	DTC124ES
fQ17	46719900	DTC124ES
fQ18	46367001	2SA1115 (XX)
	or 46367201	2SA1048 (XX)
fQ19	46367001	2SA1115 (XX)
	or 46367201	2SA1048 (XX)
fQ20	48223100	DTC114TS
fQ21	48223100	DTC114TS
fQ22	48223100	DTC114TS
• IC		
fIC2	48161110	TC9303N-002
	or 48367800	TC9303AN-002
fxO1	07237700	Quartz Element NR-18C
• Diode		
fd2	03117600	1S2473T77
	or 46086000	1S1588TP-3
fd3	03117600	1S2473T77
	or 46086000	1S1588TP-3
fd5	03117600	1S2473T77
	or 46086000	1S1588TP-3
fd6	03117600	1S2473T77
	or 46086000	1S1588TP-3
fd7	03117600	1S2473T77
	or 46086000	1S1588TP-3

Parts No.	Stock No.	Description
fd8	03117600	1S2473T77
	or 46086000	1S1588TP-3
fd9	03117600	1S2473T77
	or 46086000	1S1588TP-3
fd10	03117600	1S2473T77
	or 46086000	1S1588TP-3
fd11	03117600	1S2473T77
	or 46086000	1S1588TP-3
fd12	03117600	1S2473T77
	or 46086000	1S1588TP-3
fd18	03117600	1S2473T77
	or 46086000	1S1588TP-3
fd20	03117600	1S2473T77
	or 46086000	1S1588TP-3
fd21	03117600	1S2473T77
	or 46086000	1S1588TP-3
fd22	03117600	1S2473T77
	or 46086000	1S1588TP-3
fd23	03117600	1S2473T77
	or 46086000	1S1588TP-3
fd24	03117600	1S2473T77
	or 46086000	1S1588TP-3
fd25	03117600	1S2473T77
	or 46086000	1S1588TP-3
fd26	03117600	1S2473T77
	or 46086000	1S1588TP-3
fd27	03117600	1S2473T77
	or 46086000	1S1588TP-3
fd30	03117600	1S2473T77
	or 46086000	1S1588TP-3
fc10	46579700	4700μF 6.3V E.C.
• LED		
nLD1	48076200	SEL2913K, TUNER
nLD2	48076200	SEL2913K, CD
nLD3	48076200	SEL2913K, TAPE
nLD4	48076200	SEL2913K, PHONO
nLD5	48272600	SEL2213C, VCR
nLD6	48272600	SEL2213C, VCR

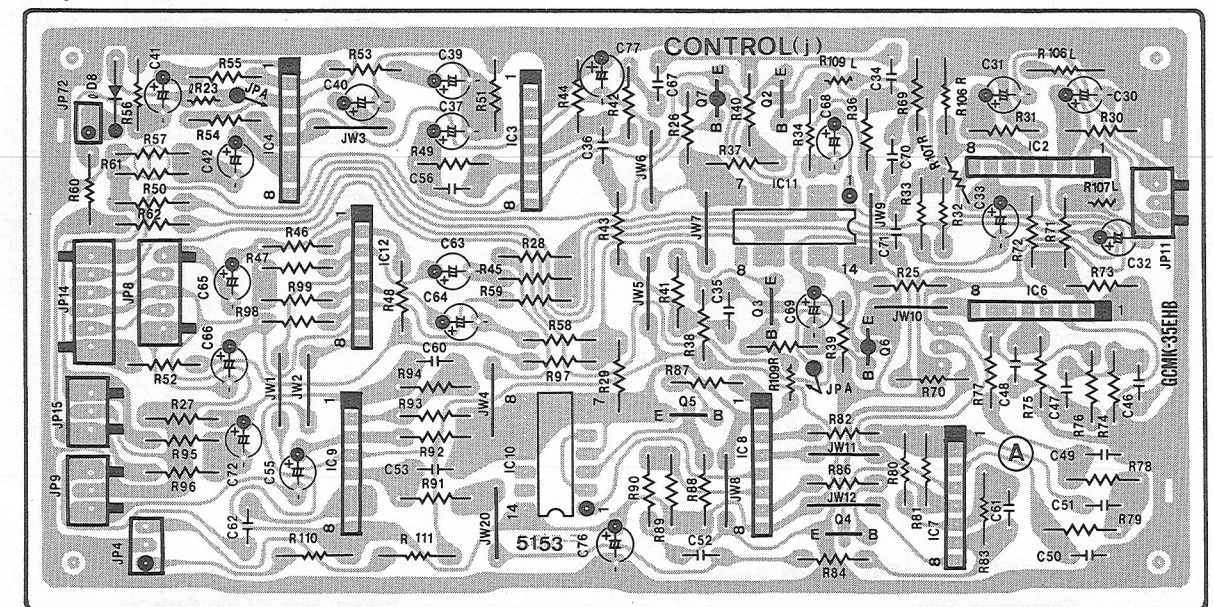
Parts List <F-5158>

Parts No.	Stock No.	Description
nLD7	48272600	SEL2213C, VCR
nLD8	48272600	SEL2213C, VCR
nLD9	48272600	SEL2213C, VCR
nLD10	48272600	SEL2213C, VIDEO-C
nLD11	48272600	SEL2213C, VIDEO-B
nLD12	48272600	SEL2213C, VIDEO-A
nLD13	48272600	SEL2213C, MUTING
nLD14	48272600	SEL2213C, MUTING
nLD15	48076200	SEL2913K, PHONO

Parts No.	Stock No.	Description
nLD16	48076200	SEL2913K, TAPE
nLD17	48076200	SEL2913K, CD
nLD18	48076200	SEL2913K, TUNER
oS10	48313700	Push SW., TUNIN/FM MODE
oS72	48315900	Push SW., PROCESSOR
		VIDEO/AUDIO
oS76	48313700	Push SW., VIDEO/TV
sFL1	48310500	FL. Display Tube

4-13. F-5153 AV SURROUND Control Amp. Board (Stock No. 00927901)

Component Side



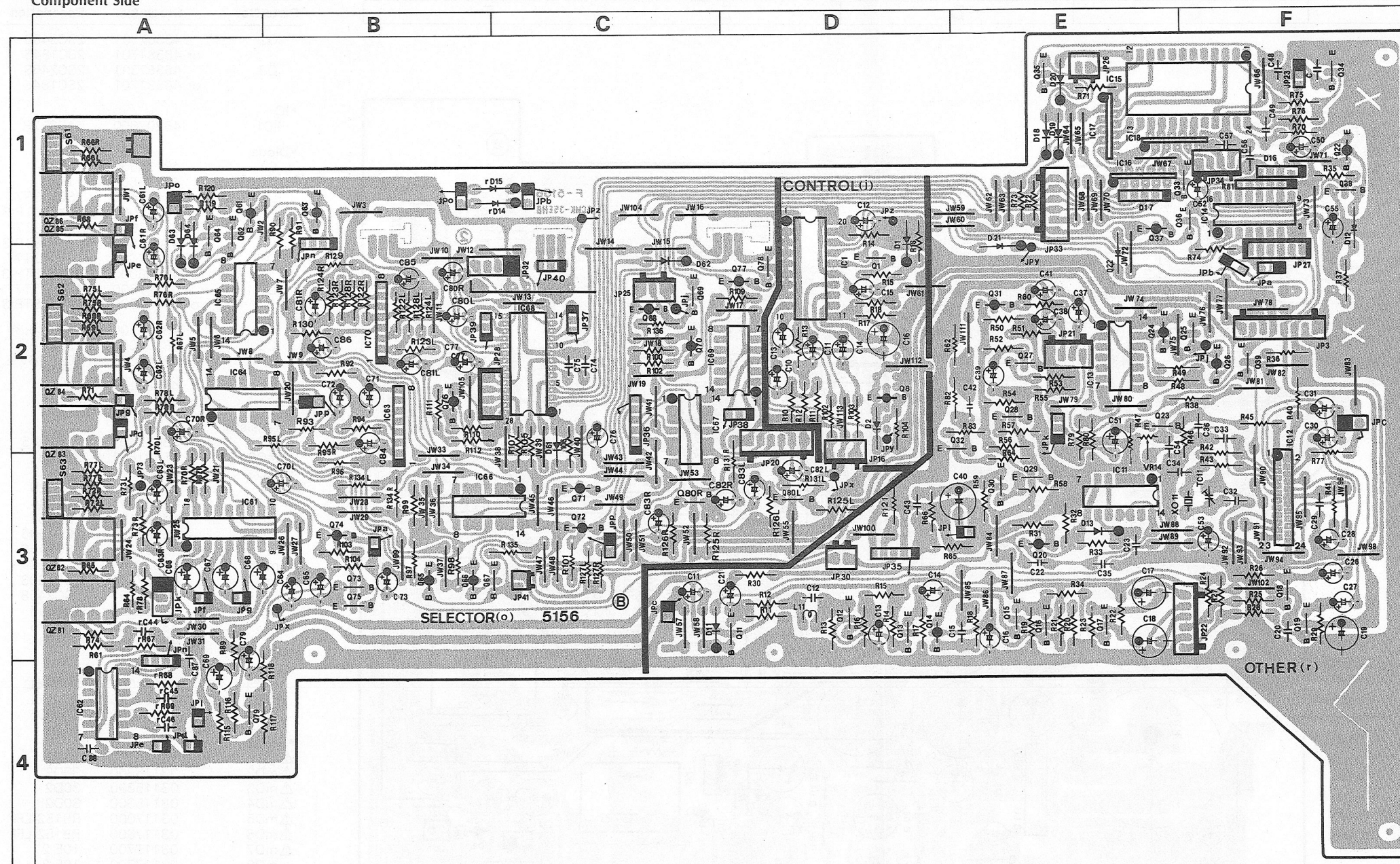
Parts List

Parts No.	Stock No.	Description
• Transistor		
jQ2	46367101	2SC2603
	or 46367301	2SC2458
jQ3	46367101	2SC2603
	or 46367301	2SC2458
jQ4	46367101	2SC2603
	or 46367301	2SC2458
jQ5	46367101	2SC2603
	or 46367301	2SC2458
jQ6	46834200	DTA144ES
jQ7	46834200	DTA144ES
• IC		
jIC2	46078900	M5218L
jIC3	46078900	M5218L
jIC4	46078900	M5218L
jIC6	46078900	M5218L
jIC7	46078900	M5218L
jIC8	46078900	M5218L
jIC9	46078900	M5218L

Parts No.	Stock No.	Description
jIC10	48053600	μPD4013BC
	or 48072400	BU4013B
jIC11	46255000	LC4066BH
jIC12	46078900	M5218L
jC34	46282800	8200pF 50V F.C.
jC35	46281900	1200pF 50V F.C.
jC36	46283900	0.068μF 50V F.C.
jC46	46284100	0.1μF 50V F.C.
jC47	46284100	0.1μF 50V F.C.
jC48	46284100	0.1μF 50V F.C.
jC49	46283700	0.047μF 50V F.C.
jC50	46282700	6800pF 50V F.C.
jC51	46284100	0.1μF 50V F.C.
jC52	46283700	0.047μF 50V F.C.
jC53	46282700	6800pF 50V F.C.
jC54	46284100	0.1μF 50V F.C.
jC62	46283700	0.047μF 50V F.C.
jC67	46283900	0.068μF 50V F.C.

4-14. F-5156 Main Board (Stock No. 00928201)

Component Side



Parts List

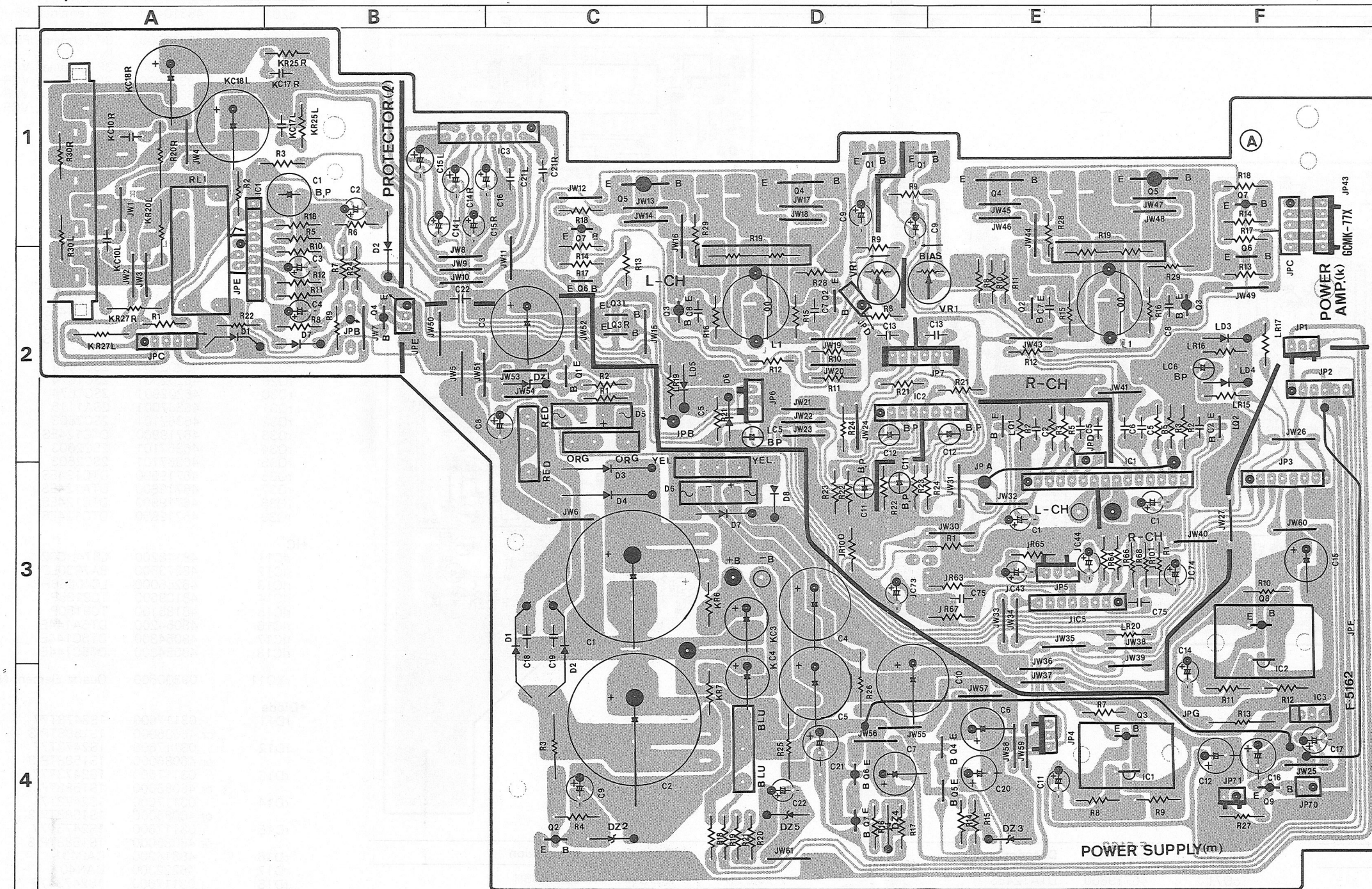
Parts No.	Stock No.	Description
•Transistor		
qQ1	46367101 or 46367301	2SC2603 2SC2458
•IC		
ic1	46671600	LC7530
•Diode		
jd1	03117600 or 46086000	1S2473T77 1S1588TP-3
•Transistor		
oQ61	46719800	DTA124ES
oQ62	46719900	DTC124ES
oQ63	46719800	DTA124ES
oQ64	46719900	DTC124ES
oQ65	46719800	DTA124ES
oQ66	46719800	DTA124ES
oQ67	46719900	DTC124ES
oQ68	46719800	DTA124ES
oQ69	46719900	DTC124ES
oQ70	46719800	DTA124ES

Parts No.	Stock No.	Description
oQ71	46719800	DTA124ES
oQ72	46719800	DTA124ES
oQ73	46719900	DTC124ES
oQ74	46719800	DTA124ES
oQ75	46719900	DTC124ES
oQ76	46367101 or 46367301 or 48058801	2SC2603 2SC2458 2SC1740S
oQ77	46719800	DTA124ES
oQ78	46719900	DTC124ES
oQ79	46367101 or 46367301 or 48058801	2SC2603 2SC2458 2SC1740S
oQ80	46367101 or 46367301 or 48058801	2SC2603 2SC2458 2SC1740S
•IC		
oic61	48056700	M51321P
oic62	46255000	LC4066BH
oic63	46078900	M5218L

Parts No.	Stock No.	Description
oic64	46255000	LC4066BH
oic65	46255000	LC4066BH
oic66	46255000	LC4066BH
oic67	46255000	LC4066BH
oic68	46394800	LC7815H
oic69	46255000	LC4066BH
oic70	46078900	M5218L
•Diode		
oD61	03117600 or 46086000	1S2473T77 1S1588TP-3
oD62	03117600 or 46086000	1S2473T77 1S1588TP-3
oD63	03117600 or 46086000	1S2473T77 1S1588TP-3
oD64	03117600 or 46086000	1S2473T77 1S1588TP-3
oS61	48127100	Slide SW., STEREO/MONO
oS62	48127100	Slide SW., STEREO/MONO
oS63	48127100	Slide SW., STEREO/MONO

Parts No.	Stock No.	Description
qZ81	48310400	3P Terminal, PROCESSOR VIDEO OUT
qZ82	48310000	3P Terminal, PROCESSOR VIDEO IN
qZ83	48310000	3P Terminal, VCR-B OUT
qZ84	48310000	3P Terminal, VCR-B IN
qZ85	48310000	3P Terminal, VCR-A OUT
qZ86	48310000	3P Terminal, VCR-A IN
•Transistor		
rQ11	46367101	2SC2603
rQ12	46367101	2SC2603
rQ13	46367101	2SC2603
rQ14	46367001	2SA1115
rQ15	46367101	2SC2603
rQ16	46367101	2SC2603
rQ17	46367101	2SC2603
rQ18	46367101	2SC2603
rQ19	46367101	2SC2603
rQ20	46367001	2SA1115
rQ22	46719800	DTA124ES
rQ23	46367101	2SC2603
rQ24	46719800	DTA124ES
rQ25	46719900	DTC124ES
rQ26	46719800	DTA124ES
rQ27	46202901	2SC1674
rQ28	46202901	2SC1674
rQ29	46202901	2SC1674
rQ30	46202901	2SC1674
rQ31	46367001	2SA1115
rQ32	46367101	2SC2603
rQ33	46719900	DTC124ES
rQ34	46367101	2SC2603
rQ35	46367101	2SC2603
rQ36	46719900	DTC124ES
rQ37	46719800	DTA124ES
rQ38	46719900	DTC124ES
rQ39	46719900	DTC124ES
•IC		
riC11	48118200	LR74HC02
riC12	48273500	BA7230LS
riC13	46255000	LC4066BH
riC14	48109600	TC9135P
riC15	48185100	TC9150P
riC16	48054200	DT5A144E
riC17	48054300	DT5C144E
riC18	48054300	DT5C144E
rxO11	09300500	Quartz Element NC-18C
•Diode		
rD11	03117600 or 46086000	1S2473T77 1S1588TP-3
rD12	03117600 or 46086000	1S2473T77 1S1588TP-3
rD13	03117600 or 46086000	1S2473T77 1S1588TP-3
rD14	03117600 or 46086000	1S2473T77 1S1588TP-3
rD15	03117600 or 46086000	1S2473T77 1S1588TP-3
rD16	48314900	DAP401
rD17	46222300	DAN401
rD18	03117600 or 46086000	1S2473T77 1S1588TP-3
rD19	03117600 or 46086000	1S2473T77 1S1588TP-3
rD20	03117600 or 46086000	1S2473T77 1S1588TP-3
rD21	03117600 or 46086000	1S2473T77 1S1588TP-3
rD22	03117600 or 46086000	1S2473T77 1S1588TP-3
rR81	46343100	100kΩX4 1/8W A.R.
rC29	46696800	0.047μF 50V F.C.
rC49	46692800	1000pF 50V F.C.
rTC11	46437500	Trimmer Capacitor 30pF
rL11	46167200	Inductor 22μH
rVR14	48118900	5kΩ S.V.R., Color Corrector Adj.

4-15. F-5162 Power Amp. Board (Stock No. 00928801) Component Side



Parts List

Parts No.	Stock No.	Description
•IC		
JIC5	46078900	M5218L
•Transistor		
ΔkQ1	03067401	2SC1845
ΔkQ2	07206401	2SD600K
ΔkQ3	07206301	2SB631K
ΔkQ4	03068101	2SC2581
ΔkQ5	03011401	2SA1106
kQ6	46367101	2SC2603
	or 46367301	2SC2458
kQ7	46367001	2SA1115
	or 46367201	2SA1048

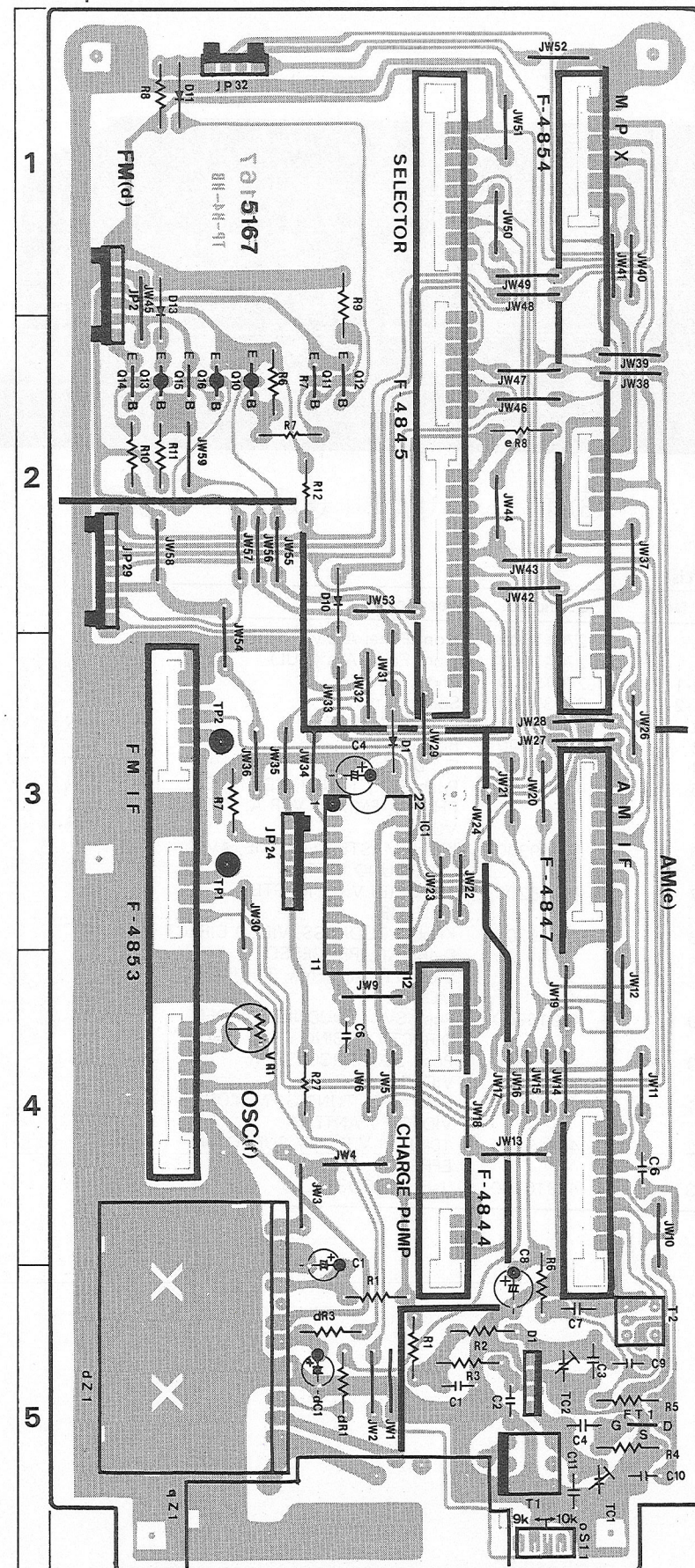
Parts No.	Stock No.	Description
•IC		
kIC1	46921800	STK3082-2A
kIC2	46078900	M5218L
kIC3	48263300	TA7273P
•Resistor		
ΔkR6	46229000	100Ω 1/2W N.I.R.
ΔkR7	46229000	100Ω 1/2W N.I.R.
ΔkR11	46228600	47Ω 1/2W N.I.R.
ΔkR12	46228600	47Ω 1/2W N.I.R.
ΔkR15	46229200	150Ω 1/2W N.I.R.
ΔkR16	46229200	150Ω 1/2W N.I.R.
ΔkR19	46645000	0.47Ω 5WX2 Ce.R.
ΔkR20	46248100	10Ω 1W N.I.R.
ΔkR25	46248100	10Ω 1W N.I.R.

Parts No.	Stock No.	Description
ΔkR28	46227400	4.7Ω 1/2W N.I.R.
ΔkR29	46227400	4.7Ω 1/2W N.I.R.
kC10	46283700	0.047μF 50V F.C.
kC11	48103500	2.2μF 50V E.B.
kC12	48103500	2.2μF 50V E.B.
kC17	46283700	0.047μF 50V F.C.
KL1	42903700	Peaking Coil
kVR1	46633700	1kΩ (B) S.V.R., Bias Adj.
•Transistor		
IQ1	46367301	2SC2458
	or 46581701	2SC1845

Parts No.	Stock No.	Description
IQ2	46367301	2SC2458
	or 46581701	2SC1845
IQ3	46367301	2SC2458
	or 46581701	2SC1845
•IC		
IIC1	46207600	TA7317P
•Diode		
ID1	48123600	11E-2
ID2	48123600	11E-2
ID3	03117600	1S2473T77
	or 46086000	1S1588TP-3
ID4	03117600	1S2473T77
	or 46086000	1S1588TP-3
ID5	03117600	1S2473T77
	or 46086000	1S1588TP-3
ID6	03117600	1S2473T77
	or 46086000	1S1588TP-3
IC1	48104200	220μF 6.3V E.B.
IC5	48102000	10μF 16V E.B.
IC6	48102000	10μF 16V E.B.
IRL1	48183100	Relay
	or 48183200	Relay
•Transistor		
mQ1	03067401	2SC1845
mQ2	46581601	2SA992
mQ3	48063301	2SB507
	or 48064601	2SB825
	or 48150701	2SB834
mQ4	03086101	2SD357
mQ5	46367101	2SC2603
	or 46367301	2SC2458
mQ6	03034401	2SB527
mQ7	46367101	2SC2603
	or 46367301	2SC2458
mQ8	48063301	2SB507
	or 48064601	2SB825
	or 48150701	2SB834
•IC		
mIC1	48129000	M5236L
mIC2	48129000	M5236L
mIC3	46361200	L78N06
•Diode		
ΔmD1	03115300	30D2
ΔmD2	03115300	30D2
ΔmD3	03115300	30D2
ΔmD4	03115300	30D2
ΔmD5	03117000	RB152-LFF
ΔmD6	03117000	RB152-LFF
ΔmD7	03117700	10E-2
mD8	03117700	10E-2
•Zener Diode		
mDZ1	46115900	05Z24-X
	or 46116000	05Z24-Y
mDZ2	46116400	05Z27-Z
	or 46116500	05Z30-X
mDZ3	46114100	05Z13-X
	or 46114200	05Z13-Y
mDZ4	46114100	05Z13-X
	or 46114200	05Z13-Y
mDZ5	46109900	05Z3.6-X
	or 46110000	05Z3.6-Y
ΔmR1	46229200	150Ω 1/2W N.I.R.
ΔmR3	46625400	820Ω 2W N.I.R.
ΔmR13	46624000	56Ω 2W N.I.R.
mC1	48188900	8200μF 71V E.C.
mC2	48188900	8200μF 71V E.C.
mC18	08680400	0.01μF 500V C.C.
mC19	08680400	0.01μF 500V C.C.
qZ2	46947500	8P Terminal, SPEAKERS

4-16. F-5167 Tuner Board (Stock No. 00929301)

Component Side

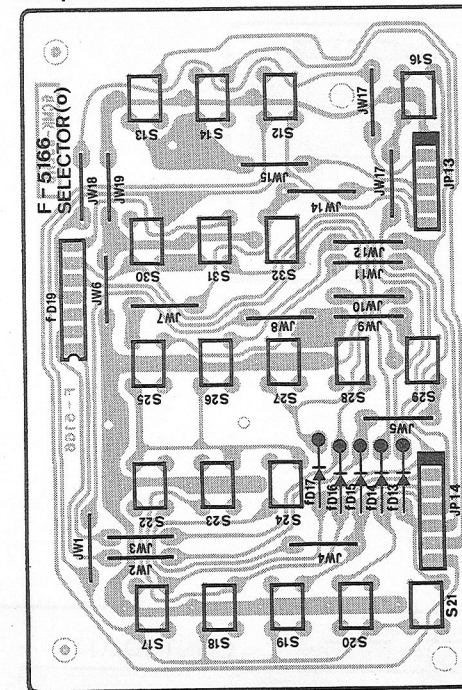


Parts List

Parts No.	Stock No.	Description
dZ1	48183600	FM Frontend Pack
• Transistor		
dQ10	46367001 or 46367201 or 46392001 46367101 or 46367301 or 46391901	2SA1115 2SA1048 2SA1175 2SC2603 2SC2458 2SC2785
dQ12	46719900	DTC124ES
dQ13	48229200	DTA124XS
dQ14	46719900	DTC124ES
dQ15	46719900	DTC124ES
dQ16	48229200	DTA124XS
• Diode		
dD10	03117600 or 46086000	1S2473T77 1S1588TP-3
dD11	03117600 or 46086000	1S2473T77 1S1588TP-3
dD13	03117600 or 46086000	1S2473T77 1S1588TP-3
Δ dR3	46227800	10Ω 1/2W N.I.R.
fVR1	10370700	10kΩ (B) S.V.R., Muting Adj.
• FET		
eFT1	46393000 or 46393001	2SK192A-Y 2SK192A-GR
eD1	46146300	Variable Capacitance Diode KV1236Z2
eTC1	46437400	Trimmer Capacitor 20pF
eTC2	46437400	Trimmer Capacitor 20pF
eT1	46394600	AM ANT Coil
eT2	48074300	MW OSC Coil
Δ eR8	46229000	100Ω 1/2W N.I.R.
• IC		
fIC1	48161001	TC9182P
• Diode		
fD1	03117600 or 46086000	1S2473T77 1S1588TP-3
oS11	48127100	Slide SW., 9k/10k Selector (xx)
qZ1	48307700	Antenna Terminal

4-17. F-5166 Control Switch Board

Component Side

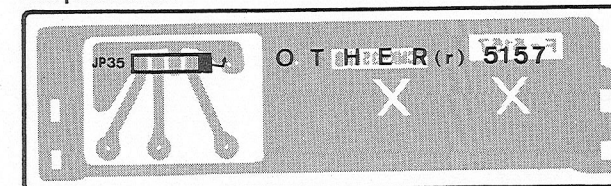


Parts List

Parts No.	Stock No.	Description
• Diode		
fD13	03117600 or 46086000	1S2473T77 1S1588TP-3
fD14	03117600 or 46086000	1S2473T77 1S1588TP-3
fD15	03117600 or 46086000	1S2473T77 1S1588TP-3
fD16	03117600 or 46086000	1S2473T77 1S1588TP-3
fD17	03117600 or 46086000	1S2473T77 1S1588TP-3
fD19	48315000	DAP601
oS12	48306900	Push SW., MEMORY
oS13	48306900	Push SW., TUNING UP
oS14	48306900	Push SW., TUNING DOWN
oS16	48306900	Push SW., PRESET SCAN
oS17	48306900	Push SW., PRESET 1
oS18	48306900	Push SW., PRESET 2
oS19	48306900	Push SW., PRESET 3
oS20	48306900	Push SW., PRESET 4
oS21	48306900	Push SW., PRESET 5
oS22	48306900	Push SW., PRESET 6
oS23	48306900	Push SW., PRESET 7
oS24	48306900	Push SW., PRESET 8
oS25	48306900	Push SW., PRESET 9
oS26	48306900	Push SW., PRESET 10
oS27	48306900	Push SW., PRESET 11
oS28	48306900	Push SW., PRESET 12
oS29	48306900	Push SW., PRESET 13
oS30	48306900	Push SW., PRESET 14
oS31	48306900	Push SW., PRESET 15
oS32	48306900	Push SW., PRESET 16

4-18. F-5157 RF Modulator Board

Component Side

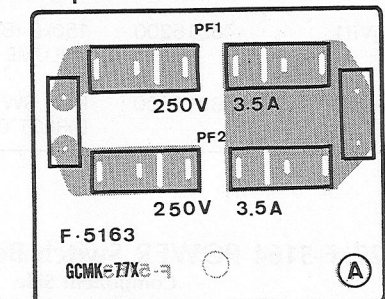


Parts List

Parts No.	Stock No.	Description
rZ1	48312800	RF Modulator MAC2X043

4-19. F-5163 Fuse Board

Component Side



Parts List

Parts No.	Stock No.	Description
Δ pF1	48267100	AC Fuse 3.5A 250V (XX)
Δ	48267500	AC Fuse 7A 250V (UL, CSA)
Δ pF2	48267100	AC Fuse 3.5A 250V (XX)

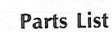
Component Side



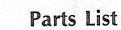
Component Side



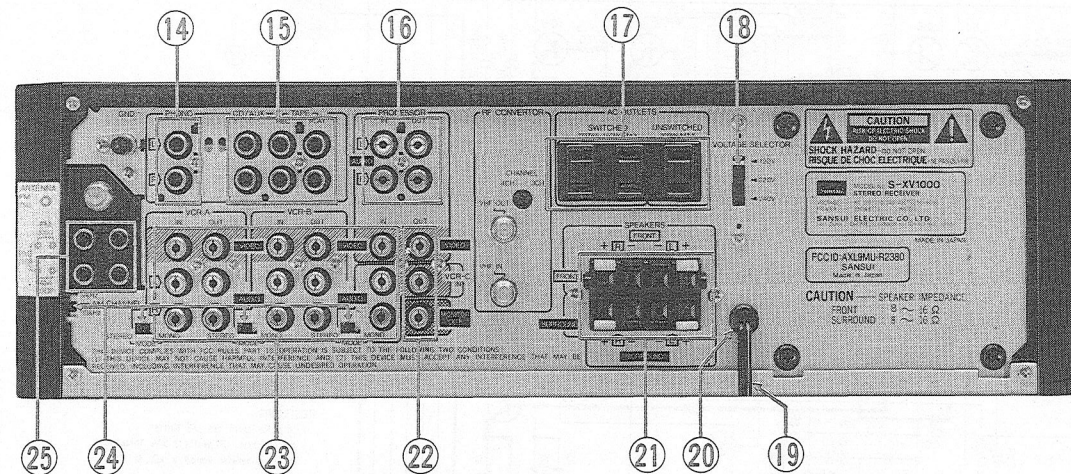
Component Side



5-1. Front View

26

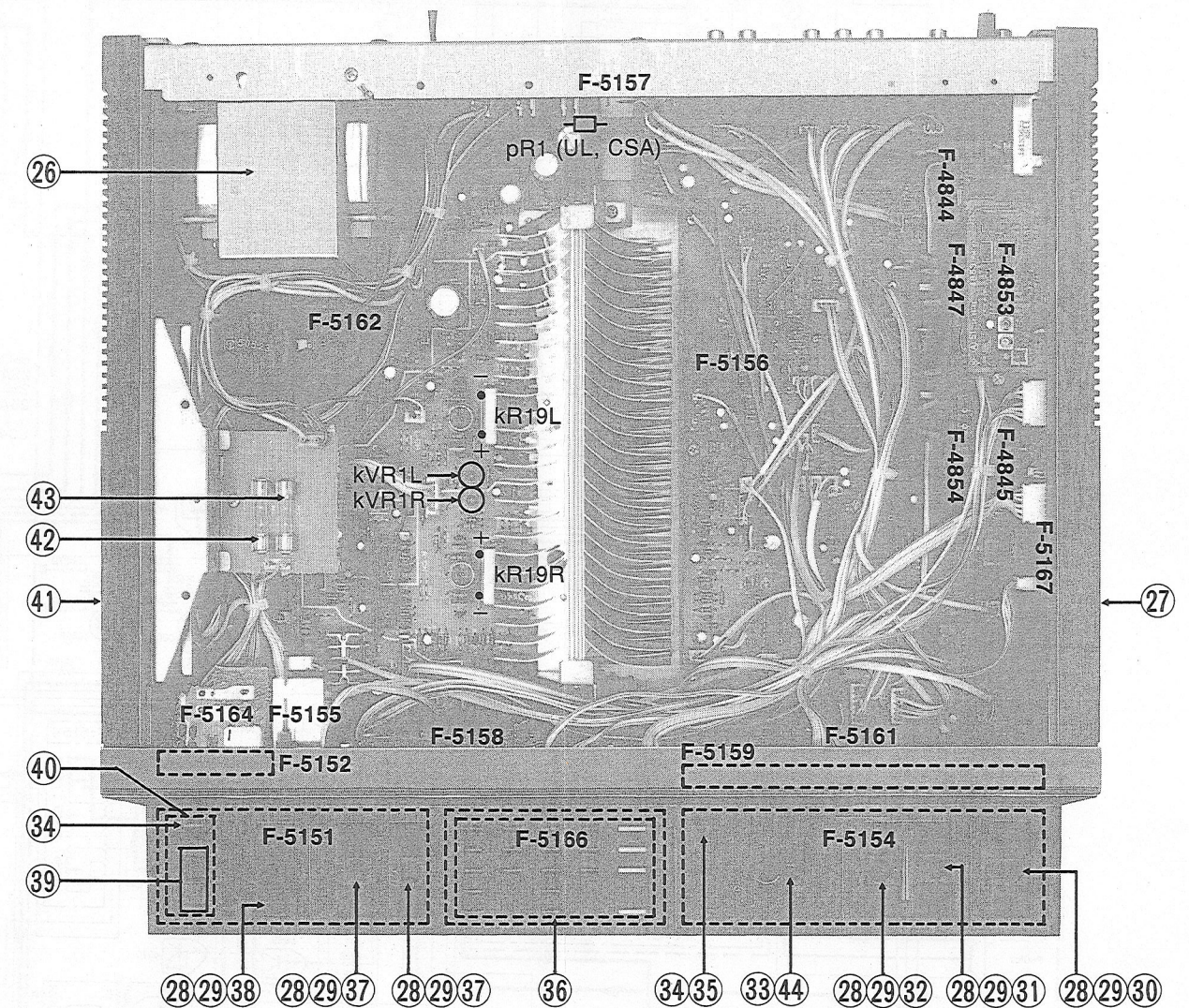
5-2. Rear View



Parts List

Parts No.	Stock No.	Description
14	46438100	2P Terminal, PHONO
15	46363900	6P Terminal, CD/AUX, TAPE
16	48310600	4P Terminal, PROCESSOR
△ 17	48372300	AC OUTLETS (XX)
△ 18	48372400	AC OUTLETS (UL, CSA)
△ 19	48062100	Slide SW., VOLTAGE SELECTOR (XX)
△ 20	38004700	Power Supply Cord (XX)
△ 21	48187800	Power Supply Cord (UL, CSA)
22	39104900	Strain Relief
23	46947500	8P Terminal, SPEAKERS
24	48310400	3P Terminal, PROCESSOR VIDEO OUT
25	48310000	3P Terminal, VCR-A, VCR-B, PROCESSOR VIDEO IN
	48127100	Slide SW., STEREO/MONO, 9k/10k Selector
	48307700	ANTENNA Terminal

5-3. Top View



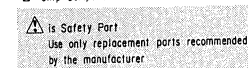
Parts List

Parts No.	Stock No.	Description
△ 26	15022301	Power Transformer (XX)
△ 27	15022302	Power Transformer (UL, CSA)
28	47036400	Right Side Panel Ass'y (XX, CSA)
29	27047700	Right Side Panel Ass'y (UL)
30	27019200	Knob, BALANCE, FADER VIDE/AUDIO
31	27020800	Masking Film
32	48315500	250kΩ V.R., BALANCE
33	48315700	150kΩ V.R., AUDIO FADER
34	48315600	1kΩ (B) V.R., VIDEO FADER
35	48316200	1kΩ (B) V.R., COLOR COR-RECTOR
	27019600	Knob, COLOR CORRECTOR, AV SURROUND
	46556400	Push SW., COLOR CORRECTOR

Parts No.	Stock No.	Description
36	48306900	Push SW., MEMORY, TUNING UP/DOWN, PRESET SCAN, PRESET 1~16
37	48315400	50kΩ (C) V.R., TREBLE, BASS
38	48315800	100kΩ (B) V.R., SUPER BASS SYNTH
39	27019700	Knob, AV SURROUND MODE
40	48315100	Push SW., AV SURROUND
41	47036300	Left Side Panel Ass'y (XX, CSA)
△ 42	27047600	Left Side Panel Ass'y (UL)
△ 43	48267100	AC Fuse 3.5A 250V (XX)
44	48267500	AC Fuse 7A 250V (UL, CSA)
△ pR1	48267100	AC Fuse 3.5A 250V (XX)
	27019500	Knob, COLOR CORRECTOR
	00048100	3.3MΩ 1/2W C.R. (UL, CSA)

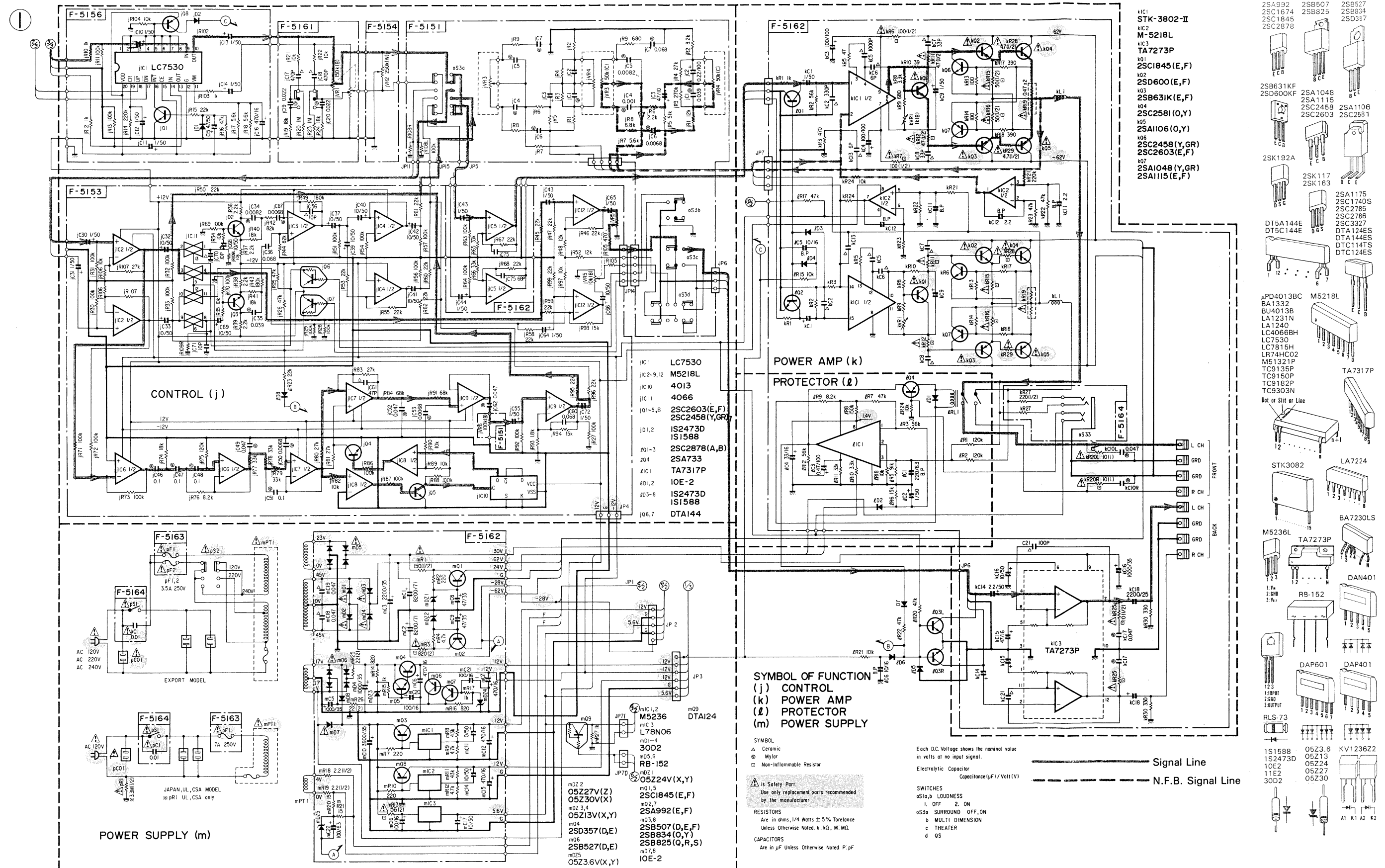
6-1. Video & Selector Section

- *Design and specifications subject to change without notice for improvement.
- *La présentation et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
- *Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.

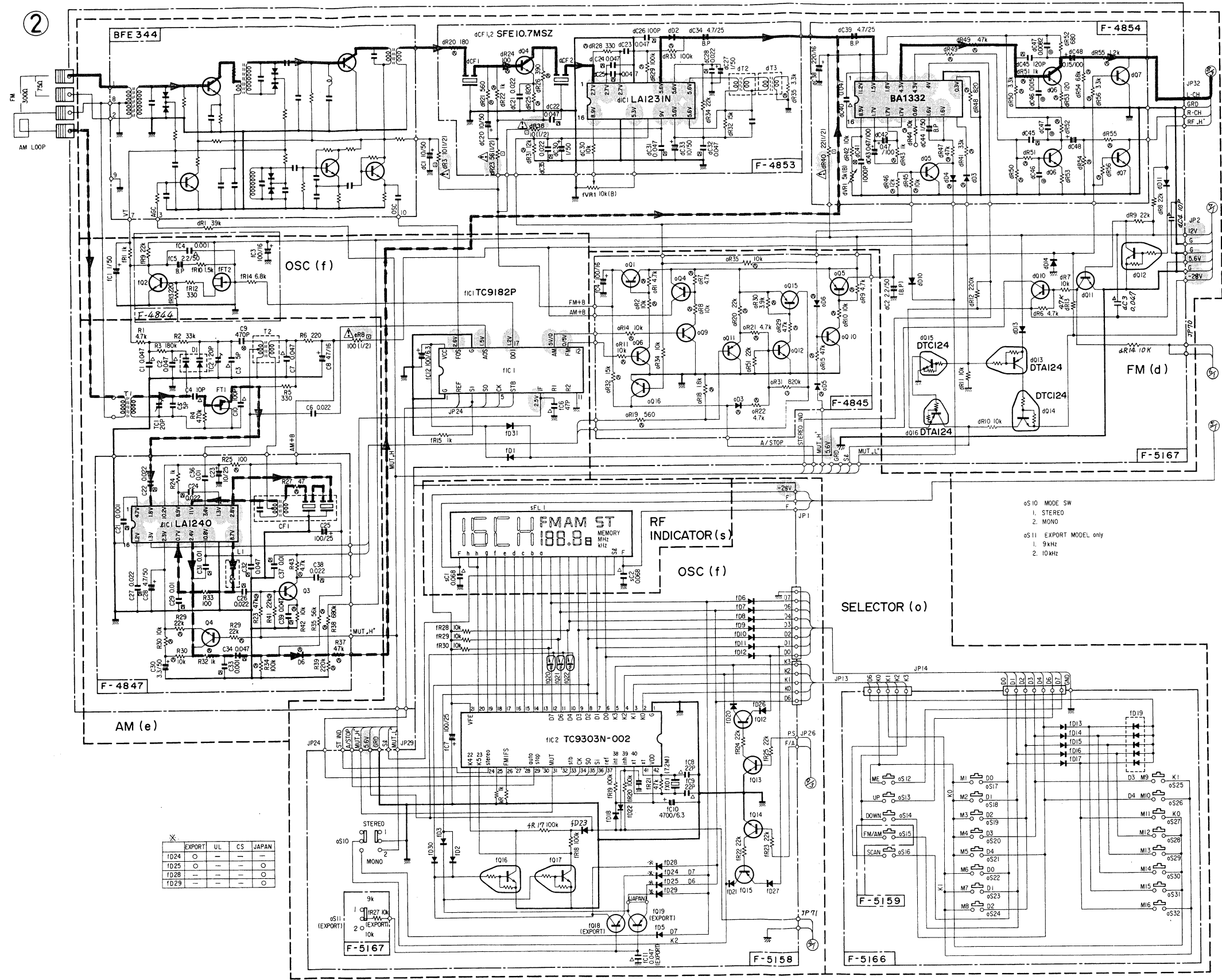


6-2. AV Surround & Power Amp. Section

*Design and specifications subject to change without notice for improvement.
 *La présentation et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
 *Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.



6-3. Tuner Section



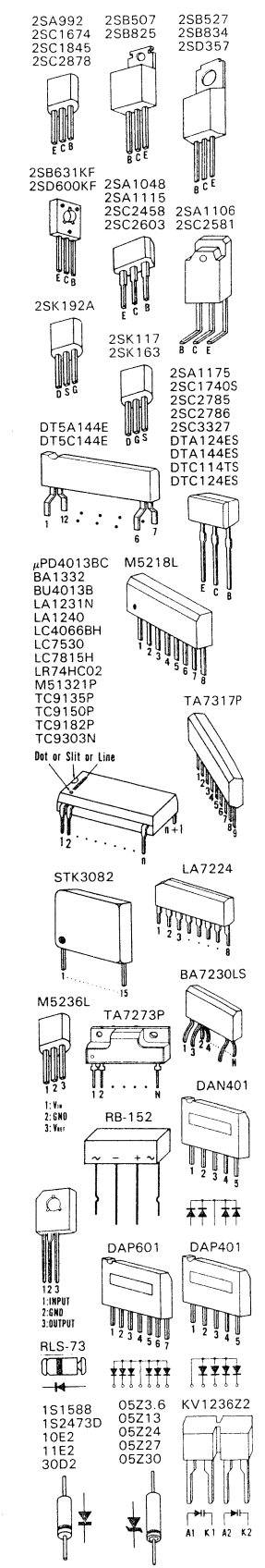
*Design and specifications subject to change without notice for improvement.
 *La présentation et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
 *Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.

SYMBOL OF FUNCTION
 (d) FM
 (e) AM
 (f) OSC
 (o) SELECTOR
 (s) RF INDICATOR

RESISTORS
 Chip Resistors are 1/8 Watts.
 Are in ohms, 1/4 Watts ± 5% Tolerance Unless
 Otherwise Noted. K: kΩ, M: MΩ.
CAPACITORS
 J: ± 5% G: ± 2% F: ± 1%
 Each D.C. Voltage shows the nominal value in volts
 at no input signal.
 Electrolytic Capacitor: Capacitance(μF) / Volt(V)

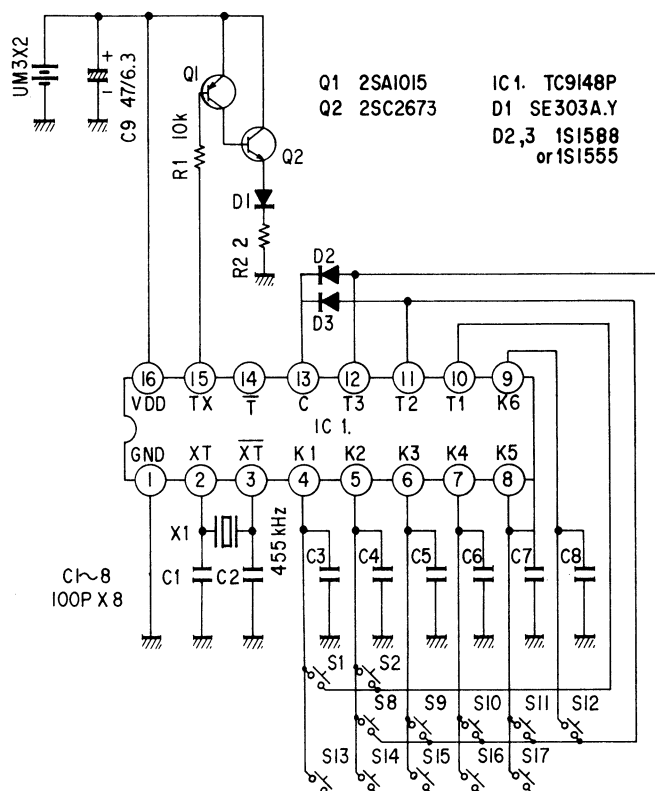
SYMBOL
 Δ Ceramic Capacitor
 ⊗ Film Capacitor
 □ Non-Inflammable Resistor
 ▢ Polystyrene
 ⊕ Chip Component (Cylindrical type)
 ⊖ Chip Component
 ⚠ Safety Part.
 Use only replacement parts recommended by the
 manufacturer.

d04
 2SC2786(L,K)
 d05,6,11, 006,9,10,12,16
 BU4013B
 LA1231N
 LA1240
 LC4066BH
 LC7530
 LC7815H
 LR74HC02
 M51321P
 TC9135P
 TC9150P
 TC9182P
 TC9303N
 Dot or Slot or Line
 d01,4,5,11,15
 d02,3,4
 d03,5,6
 d06
 RLS-73
 d010,11,13,14
 d01~18,20~30
 IS2473D
 IS1588
 d05
 KV1236
 DAP601
 d016,17
 d012,14,15
 DTC124
 d013,16
 DTA124
 1FT2
 2SK117(Y,GR)
 2SK163(K2,L1)
 eFT1
 2SK192A(Y,GR)
 12 20~22
 DTC 114.75



FM Signal Line
 AM Signal Line

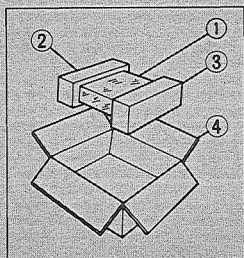
6-4. Remote Controller, RS-1000V



Key No.	Key Name
S1	VOLUME +
S2	VOLUME -
S8	VCR-C
S9	VCR-B
S10	VCR-A
S11	PHONO
S12	TAPE
S13	CD
S14	TUNER
S15	FM/AM
S16	PRESET SCAN
S17	MUTING

7. PACKING LIST

Parts No.	Stock No.	Description
1	47858400	Vinyl Cover
2	27052000	Styrofoam Packing (L)
3	27052100	Styrofoam Packing (R)
4	27051900	Carton Case



8. ACCESSORRY LIST

Stock No.	Description
46051700	FM Antenna
46186100	AM loop Antenna
07563000	Antenna Holder
48111100	Antenna Connector Cord (NTSC)
46988800	Operating Instruction
	Remote Control Unit RS-1000V
	Dry Battery SUM-3K

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(SM1-280)

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